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Wines:

SCRIPTURAL AND ECCLESIASTICAL.

BY

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"UNFERMENTED WINE A FACT," "THE MORTALITY OF INTEMPERANCE,"
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TO THE

RIGHT HON. AND MOST REVEREND

The Lord Archbishop of Canterbury,

AND THE OTHER PATRONS AND MEMBERS

OF THE

CHURCH HOMILETICAL SOCIETY,

THIS LITTLE WORK

(AN EXPANSION OF A LECTURE DELIVERED TO THE SOCIETY,

IN THE

CHAPTER HOUSE OF ST. PAUL'S CATHEDRAL,

ON 1ST NOVEMBER, 1881, UNDER THE PRESIDENCY OF

B. W. RICHARDSON, ESQ., M.D., F.R.S.)

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PREFACE.

THIS little book, written amid the constant interruptions and distractions of a busy professional life, is, with all its imperfections, submitted to the reader, in the confident hope that the facts stated and the testimony adduced will be carefully weighed by every friend to Christianity and to Truth.

N. K.

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December, 1881.

PART I.

WINE: SCRIPTURAL.

CHAPTER I.

THE QUESTION STATED.

THE Scripture wine question has been forced upon me very much against my inclination. It was with the greatest reluctance I looked at it for a moment. The lawfulness of either abstaining or non-abstaining temperance is not affected by it; and the absorbing cares of medical practice, as well as the serious duties of life, leave me little time for philological or theological controversy. Of all the mean actions of degenerate humanity I know none meaner than the defence of sensual habits from the Bible. The sacred volume is the charter of our salvation, and a lamp to light us on the way to heaven. The word of God was never meant to

teach us either chemistry or dietetics. In the attainment of a knowledge of the value and properties of any article of food or drink, it is a degradation of the Bible to go to it for that information which it is the province of chemistry, physiology, and pathology to furnish.

INDIFFERENCE OF THE AUTHOR TO THE BIBLE WINE QUESTION.

The God of Nature is the God of Revelation, and there can be no contradiction between His Work and His Word. It has been demonstrated that fermented and distilled intoxicating liquors are irritant narcotic poisons. To teach that Christ made, and the Bible approved, the social use of fermented intoxicating wine is, therefore, to teach that He made, and the Bible sanctioned the social use of, a narcotic poison, poisonous alike to body and to brain—a proposition which seems to me to carry with it its own condemnation. Such being my position, the controversy that has raged so long and so fiercely over the wines of the Bible has no interest for me.

THE BIBLE WINE QUESTION FORCED UPON THE AUTHOR.

This question has been thrust upon me whether

I would or not. Infidels deny to me the inspiration of the Bible, the Infallibility of its author, and the Divinity of Christ, on the ground that the Bible approves, and He made, what all men of science know to be poison. These unbelievers exultingly quote to me the dogmatic assertion of a host of divines, that Christ made, and the Bible commends, intoxicating wine. I have met Christians, too, who have opposed the beneficent total abstinence reform from the supposed Scripture sanction of intoxicating drink. For once, Christian divines and avowed infidels have united in an interpretation of Scripture, which places the Bible in direct antagonism to the facts of every-day life. If there is one thing plainer to me, as a medical man, than another, it is that intoxicating liquors are, as their name implies, poisons, destroying more lives than all other poisons put together. Sir Wm. Gull testified, before the Lords' Committee, that alcohol is the most destructive agent known to us in this country ; and the highest authorities on the growth and manufacture of wine, Drs. Thudicum and Dupré, admit that alcohol is a poison "even in small doses" ("Or. Nat. and Use of Wine," p. 125. Lond. 1872). "Alcohol is a poison, so is arsenic" (Dr. Andrew Clark, "An Enemy of the Race." Lond. 1881).

TWO ESSENTIALLY DIFFERENT KINDS OF BIBLE WINE.

Observation, experience, and science agree that alcohol is a poison to both body and brain. This is a fact beyond dispute. Intoxicating liquors (fermented wines, beers, and spirits) owe their intoxicating properties to this poison, alcohol ; all these liquors being simply, besides a few unimportant additional ingredients, mixtures of an irritant narcotic poison and water. The Bible is therefore in harmony with science and with fact when it speaks of a wine יַיִן, *yayin*, which is a "poison" and a "mocker." Observation, experience, and science agree that unfermented wine is unintoxicating, not a poisonous but a nutritious and wholesome beverage. The Bible is therefore in harmony with science and with fact when it speaks of a wine which is a "good wine," καλὸν οἶνον, *kalon oinon*, and a wine, יַיִן, *yayin*, that "maketh glad the heart of man."

THIS SOLUTION OF THE WINE QUESTION DISPUTED BY INFIDELS.

This recognition of two essentially different kinds of wine, intoxicating and unintoxicating, in-

jurious and beneficial, so harmonizes the Bible with science and with fact, that it has been persistently disputed by infidels. In an article in the "Westminster Review" for January, 1875, the writer says, "It was reserved for the end of His career to impart the most solemn sanction to the use of wine by an act which even unbelievers in inspiration (not always the worst friends to Jesus' real fame) will admit to be historical. His ministry commences with the production of fermented liquors; it closes with their sanctification. The one kind of drink, the manufacture of which is rendered incumbent on man—from which it has been ordained that no man who literally follows the orders of Jesus can entirely abstain—is precisely a form of strong drink, the fermented juice of the grape."

That Christians who hold the social use of intoxicating wines to be sanctioned by our Lord and by the Bible may know the effect of this interpretation of the sacred writings, I append the following extract from the article just referred to: "There are some passages in which hilarity seems to be condoned, if not actually commended. When Joseph, that type of every virtue, entertains his brethren, they all get drunk together. The Hebrew word used is precisely that employed to designate the drunkenness of Noah. We do not suppose

that they fought among themselves or fell under the table, but we are entitled to take it that they were decidedly elevated. Yet their conduct is related as a matter in the common course, and without a word of disapproval."

CHAPTER II.

DIFFICULTY OF THE INQUIRY.

It is difficult, if not impossible, in an inquiry which refers to the manners and customs of a far-off people in bygone ages, and to the meaning of words in a tongue now many centuries silent, to trace the original signification of obscure terms, and let in the light of knowledge to illume the darkness of our ignorance by the discovery of

"The jealous keys of Truth's eternal doors."

"We have to remember the difficulty which must be felt in discriminating words which have a close mutual connection, in that which has been near 2,000 years a dead language; and with respect to its niceties, even the ancient translations may be of little value, partly on account of the ignorance and carelessness of their authors, and partly also because these men assumed that their readers

were as familiar with the topic as they were themselves" (Prof. Douglas, "Imp. Bib. Dic.," art. Wine).

CHANGE OF TASTES AND FASHIONS.

Tastes and fashions alter. The delicacy of to-day will be the offal of to-morrow. Speaking of flour fried with oil, Calmet says, "Such sort of sauces will not go down now; but fashions alter, and there is no dispute about tastes. All these sorts of bread were offered in the temple of the Lord; and clear evidence of their being looked upon as the most exquisite" ("Ant.," ed. Tindal, p. 149. Lond. 1727).

As regards wine, there being a fashion in drink as there is in dress, our taste is the very antipodes of that of many of the ancient and modern peoples of the East.

RESINED WINE LIKED BY THE GREEKS, DISLIKED BY THE ENGLISH.

The addition of resin, turpentine, and sea-water to wine has always been a favourite practice in some countries.

Practised by the Ancients.—Wines were treated with resin, an infusion of pitch and sea-water (Dios.

v. 23 ; J. A. St. John, "Mann. and Cust. Anc. Gr." iii. 117. Lond. 1842). Amongst the plants used to flavour wine were wormwood, squills, myrtle, terebinth, and fir-cones (ibid. iii. 118, 119). Dodwell ("Class. and Top. Tour." Lond. 1819) says the ancients mixed resin with wine. (Cels. ii. 19 ; Pliny, N. H. xxiii.) He terms it "vinum resinatum" and "pice conditum."

Practised by Moderns.—"The wines of Macedonia and Thessaly, on account of the tar or pitch which is added to keep them, are mostly of intolerable taste" (Thud. and Dupré, p. 703). Greek wines spoiled in taste with the "horrid preservatives of antiquity," as smoking with wood, and the vapour of rosins, pitching the barrels, adding turpentine, gypsum, chalk, salt, &c. (ibid. p. 705).

Thomson, speaking of the Cyprus wine, says, "It tastes of tar as it did in Lithgow's time, who characterized this practice as 'making the taste unpleasant to liquorish lips'" (J. Thomson, F.R.G.S., "Cyprus," ii. 30. Lond. 1879).

RESIN WINE DISLIKED BY THE ENGLISH AND OTHERS.

"The wine of the Morea is positively undrinkable from the resin it contains" (Wm. Turner

"Tour Levant," i. 434. Lond. 1820). At the Bishop of Salona's "the wine was execrable, and so impregnated with rosin that it almost took the skin from our lips" (E. Dodwell, F.S.A., i. 155. Lond. 1819). The wine of Cyprus had so strong a taste of tar that Bernard Picart could not drink it ("Cer. and Rel. Cust.," ii. 579). "The best wines in Greece we found excessively unpalatable, so saturated with resin and vinegar that none of us could take a second sip" (Emily A. Beaufort, "Eg. Sep. and Syr. Shr.," ii. 376, 2nd edit. Lond. 1862). "Resined wine is about the nastiest thing you can conceive" (R. A. Arnold, "Fr. the Levant," i. 171. Lond. 1868).

LIKED BY THE GREEKS.

Though in Britain we turn with loathing from the resined wines of Greece, the inhabitants of that classic country drink with pleasure these, to us, nauseous compounds. "The present Greeks like it [resin] so much that it is difficult to prevail on them to take wine without it" (Sir T. Wyse, K.C.B., "An Exc. in the Pelopon.," ii. 142. Lond. 1865).

LANGUAGES CHANGE.

Not only do taste and fashion change; language itself is constantly undergoing alteration, the rate

and extent of alteration being dependent on a variety of circumstances. "Permanence is more or less regulated by circumstances. A language which resists influence for a century may fail to do so for a millennium; or a language which, with no alterative influence to touch it, may remain unchanged for a century, may, under conditions unfavourable to its permanence, transform itself into something else in a generation or two" (R. G. Latham, M.D., F.R.S., "El. of Comp. Phil.," p. 528. Lond. 1862).

THE MEANING OF WORDS CHANGES.

Words have a significance to-day altogether different from their meaning a few centuries back. Take, for example, the word "sherab," represented by our modern English word "syrup." Though with us designating only an unintoxicating sweet preparation, it was at one time, and in fact is now, in the East, a name for wine.

Persian.—"Sherap, wine. Ungee koob (good) sherabbas?—Is there good wine? Sherap bedee (some) zood—Give me some wine" (Sir Thos. Herbert, "Gloss. Trav.," p. 46. Lond. 1634). "Chiraup Zjieraas; noen Yesgadaes; seu de Yes"—Schiraz for wine; Yesdecast for bread; and Yest for women (Old Pers. prov.—Le Bruyn, "Musc. Pers. and E. I.," ii. 4. Lond. 1737). "The word scharab, which

signifies wine, a draught, a julep, a syrop" (Sir W. Ouseley, LL.D., "Trav.," iii. 207. Lond. 1819). "Wine, sharab" (Thornhill Tucker, "Pock. Dic. E. and Pers." Lond. 1801). "Wine, the fermented juice of the grape, sharab" (Rozario, "Dic. Bengal. and Hindost." Calc. 1837). "Wine, sherab" (A. L. Davids, "Gram. Turk."). "Wine, sharāb" (D. Forbes, "Dic. Hindust." Lond. 1857). "Vin, cherâb, chorâb" (Marcel, "Voc. Fr. Arab." Paris, 1857).

At the present day, on the borders of Persia and Kurdistan, they call beer "lal (ruby) sharab," and sometimes "beer-sharab." Other drinks are given their foreign names with the word "sharab" after these. Sharab, wine (Gen. Burnaby, "As. Min.," i. 90. 3rd edit. Lond.).

In the same manner "kahweh," coffee, once meant "wine."

With reference to another word, the greatest living philologist, Prof. Max Müller, in a lecture in Westminster Abbey, said, "The word rose to the surface thousands of years ago; it was retained, while what was meant by it went on changing from century to century."

"WINE" NOT NECESSARILY ALWAYS MEANS THE SAME KIND.

We must not, therefore, conclude that the word

wine, or its equivalent in other languages, as *oinos* or *vinum*, always meant precisely the same thing we have been accustomed to call wine. As Cyrus Redding truly says, "The knowledge of the essential properties of the ancient wines is a sealed book to us for ever" ("Hist. Mod. Wines," 2nd edit., Intro. p. xiii. Lond. 1836).

CANONS OF INQUIRY.

In the inquiry into the accurate signification of the various Scripture words translated "wine," "strong drink," &c., a few canons of research are indispensable. We must endeavour to ascertain what was the most probable meaning affixed to the particular word by the persons addressed, by inquiring into the beverages then in use, so far as this can be learned from tradition, history, and the writings of contemporary and succeeding authors. We must not interpret the words or doings of any one, Divine or human, so as to make these inconsistent with his character and teaching. When several meanings can be given to a particular word, that meaning shall be deemed most likely which best suits the text and the context, is most in harmony with known truth, and is most consistent with the spirit and doctrine of the Bible.

WE MUST NOT SURRENDER OUR JUDGMENT TO AUTHORITY.

In this intricate and difficult inquiry it is essential that we dismiss from our minds all preconceived notions and prejudices. Nor in the elucidation of the truth are we at liberty to bow down to authority, and surrender our independent judgment at the dictation of any one. Wisely does Calmet write, "We must not be carried away with the notion that the first interpreters of the Holy Bible have left no room for new discoveries, or that it is impossible to clear up those difficulties which have not as yet been explained. In matters of this nature we ought not to be biassed by authority and numbers" ("Ant.," ed. Tindal, Gen. Pref. Lond. 1727).

THE INQUIRY TO BE CALM, INDEPENDENT, AND FAIR.

In the genuine spirit of a single-eyed search after the truth, let us calmly, and without fear, favour, or affection, lay science, literature, and tradition under tribute, in the hope that we may be enabled to throw a little fresh light on a complex and obscure question. If we succeed in this endeavour,

no matter in how small a degree, let us be thankful; for even in our most strenuous exertions at enlightenment,

> "Blindly we feel about
> Our little circle—ever on the quest
> Of knowledge, which is only, at the best,
> Pushing the boundaries of our ignorance out."

CHAPTER III.

THE WINE AT CANA.

NO ABSOLUTE KNOWLEDGE OF ITS NATURE.

So far as the merely verbal controversy goes, Scripture wine (the wine at Cana, for example) may have been alcoholic or non-alcoholic. No modern chemist was there to analyse the wine and report whether it contained alcohol, and, if it did, whether the alcohol was present in intoxicating proportion. We can form an opinion of the intoxicating or non-intoxicating quality of the wine only from our knowledge of the character of the maker.

PROBABLY UNINTOXICATING.

If any man think that He made poison to be drunk by wedding guests who had well or freely drunk of the poison already, let him. I, for one,

believe nothing of the kind, and I call upon my opponents to produce their proof. I cannot prove that the wine He made was innocent, nor is there any reason why I should. The theory that our Saviour turned water into another harmless and wholesome beverage involves no moral difficulties; but the theory that He turned water into an irritant narcotic poison involves great moral difficulties, and is a tremendous weapon in the hands of a well-informed modern infidel.

The hypothesis that the wine Christ made at Cana was unintoxicating invests the miracle with peculiar beauty and force, inasmuch as it represents Him accomplishing in a moment that which takes several months each year, the conversion of the watery sap of the vine into wine in the grape. This is the interpretation sustained by Chrysostom, the Bishop of Norwich (1650), Rev. W. Law (1702), and many others.

OPINION OF CHRYSOSTOM AND OTHERS.

Chrysostom: "*Δεικνὺς ὅτι αὐτός ἐστιν ὁ ἐν ταῖς ἀμπέλοις τὸ υδωρ μεταβάλλων καὶ τον ὑετὸν διὰ τῆς ῥίζης εις οἶνον τρὲπων ὁπερ εν τῷ φυτῷ διὰ πολλοῦ χρόνου γινεται, τοῦτο αθρόον εν τῷ γαμῳ ἔιργάσατο.*"

"Showing that it is He who changes the water

in the vines and the rain absorbed through the root into WINE, who did in an instant at the marriage that work which takes a long time in the plant." (Hom. xxii. in Joh.).

Augustine: "Ipse enim fecit *vinum* illo die in nuptiis in sex illis hydriis quas impleri aquâ præcipit, qui omni anno facit hoc in vitibus . . .; illud autem non miramur quia omni anno fit."

"For He on that nuptial day made *wine* in the six pots which He ordered to be filled with water, Who every year makes this in the vines . . . : but we do not wonder at this because it is done every year" ("In Evang. Joh.," Tract. viii.).

The Bishop of Norwich: "What doth He in the ordinary way of nature, but turn the watery juice that arises up from the root into wine? He will only do this now suddenly, and at once, which He doth usually by sensible degrees" (Josh. Hall, D.D., "Contempl.," p. 117. Lond. 1759).

The Archbishop of Dublin: "He each year prepares the wine in the grape, causing it to absorb, and swell with, the moisture of earth and heaven, to transmute this into nobler juice of its own; concentrating all these slower processes into the act of a single moment, and accomplishing in an instant what usually He takes many months to accomplish" (Trench, "Notes on Mirac.," p. 109. Lond. 1862).

ANSWER TO OBJECTION.

It has been objected to this rational and beautiful interpretation that it derogates from His power. It would, says the objector, be a greater miracle to convert water into alcoholic than into non-alcoholic wine, inasmuch as the conversion of sugar into alcohol is a matter of time under ordinary circumstances. The immediate presentation of alcoholic wine would be more wonderful, it is said, than the immediate presentation of the blood of the grape. This is groundless. Either kind of wine would be made by the immediate union of the constituent elements—carbon, hydrogen, oxygen, &c. Therefore, whether united in proportion to form alcoholic or non-alcoholic wine, the Divine power would, for the immediate production of the wine, be as necessary and as evident in the one case as in the other. It takes much longer for the sap of the vine to be converted into wine in the grape, than for intoxicating wine to be produced from the unfermented juice. The former process occupies several months, the latter only a few days. In either case, the Divine power would be manifested by the supersession of all the intervening stages, and the instantaneous attainment of the result.

CHAPTER IV.

FERMENTATION AND ITS PREVENTION.

EXISTENCE OF UNFERMENTED GRAPE JUICE DENIED.

In arguing with an atheist some years ago, I was for a moment silenced when he showed me a book, written, I regret to say, by a minister of religion, denying the possibility of the existence of such an article as unfermented wine. Of course, if this is true, the controversy is at an end. If intoxicating wine cannot exist, the Bible, wherever it speaks of wine, must refer only to intoxicating wine. The proposition was so startling that, as an imperative duty, I resolved if possible to arrive at the truth. For nearly a year, aided by my friend Mr. T. A. Clifford, an accomplished chemist, I conducted a minute and crucial series of experiments with grapes and grape juice. (For detailed account of these experiments see my work "Unfermented

Wine a Fact." National Temperance Publication Depôt, 337, Strand. Reprinted also in the 5th edit. "Temperance Bible Commentary.)

UNFERMENTED GRAPE JUICE A FACT.

The outcome of this extended research proved that grape juice can be preserved unfermented and unintoxicating [1] by a variety of processes, some of which have been and are still in vogue in Eastern countries.

FERMENTATION DEFINED.

The writer of the book in question, evidently from unacquaintance with scientific work and phraseology, had supposed that all fermentation was alcoholic, and thus misunderstood and unintentionally misrepresented the evidence of chemists, to the effect that fermentation begins immediately on exposure to the air.

The word "fermentation" is sometimes applied to the ripening process that goes on within the

[1] "The juice of many grapes is fragrant *before* fermentation" (Mulder, "Chem. of Wine," p. 329. Lond. 1857). Speaking of Jeropiga, the authors say it is sometimes made of "the pure, sweet must, *unfermented*, with the addition of brandy" (Thudicum and Dupré, p. 677). They also describe a variety made of "unfermented grape juice," &c. (ibid.).

uncrushed fruit,[1] and sometimes to such changes as begin in animals and vegetables as soon as death has taken place.[2]

In a sense, in the words of the old proverb, "Everything which lives is born dying;" and in this sense, like everything organic—like man, bird, beast and plant—grape juice, fermented or unfermented, bears within itself the germ of corruption.

The term fermentation, however, is generally given to such special processes as—

1. The *Alcoholic* or *Vinous* fermentation; that accompanied by the formation of alcohol—the *only fermentation with which the Scripture wine question has to do.*

2. The Acetous fermentation; that accompanied by the formation of vinegar.

---

[1] "The maturation or sweetening of winter fruits, when stored up for their preservation in straw, is the result of a true fermentation" (Liebig, Lett. xviii.). "After being packed up at Tayf in an unripe state, it [fruit sold at Djidda] acquires a factitious maturity by fermentation during the journey" (Burckhardt, "Not. Bed. and Wahab," ii. 55. Lond. 1831). "A long fermentation in the uncrushed cluster" (Prof. Bouchardat on "Wine of St. Raphael," p. 9. Lond. 1878).

[2] "As few individuals have an oil press, they have often to wait so long that the olives fall into a state of fermentation, which is succeeded by putrefaction" (De Salis, "Trav.," p. 477. Lond. 1795).

3. The Lactic fermentation ; that by means of which milk sours and curdles.

FERMENTATION OF GRAPE JUICE AND MILK ANALOGOUS.

The fermentation of grape juice and the fermentation of milk are analogous (Dr. T. Willis, F.R.S., on "Ferment.," vol. i. pp. 60, 62. Lond. 1681).

In the one, grape sugar is decomposed by the ferment *torula* or *saccharomyces cerevisiæ* (Huxley and Martin, "Prac. Biol.," 3rd ed., p. 1 ; "Encyc. Brit.," 9th ed., art. "Alcohol," p. 470 ; "Brit. Med. Journ.," No. 903, p. 579).

In the other, sugar of milk is decomposed by the ferment *bacterium lactis* (Lister, "B. M. J.," No. 875, 6th October, 1877). The fermentation of both the animal and vegetable substances begins in the same way. In both it can be prevented or checked by similar precautions ;[1] and allowed to proceed, in both it ends in putrefaction (Liebig, "Lett. Chem.," 3rd ed., p. 224 ; 2nd ser., p. 132).

Momentary contact with the organic germs in

[1] "At Chorla and neighbouring villages, the first thing they do after milking the cows and sheep is to boil the milk, without which they say it would not keep" (H. J. Hamilton, F.G.S., "Res. As. Min. Pont. and Armen.," ii. p. 316. Lond. 1842).

the air sets up the same series of changes in each liquid, so that if juice freshly expressed from the grape be called fermented, so also must milk newly drawn from the cow. In other words, milk, which we know to be sweet, must be said to be sour.

The series of changes which, unchecked or unhindered, ends in the putrefaction of a mutton chop is, in a general sense, a process of fermentation; and if it be correct to designate *must* before the vinous fermentation has set in as a "fermented wine," we cannot avoid speaking of the fresh and juicy specimen of animal flesh that we, as Englishmen, delight in, as a "putrid chop" (Dr. N. Kerr, "Unfermented Wine a Fact," pp. 6, 7. Lond. 1879).

VINOUS FERMENTATION NOT IMMEDIATE.

There are thus various fermentations, alcohol being the product of *vinous* fermentation, which process is set up by the yeast plant.

Vinous fermentation is *not* immediate on the expression of the juice from the fruit, but begins sometimes in a few hours, sometimes not for days. Fermentation cannot take place except under certain conditions, and the absence of these conditions can be secured by the adoption of practical measures.

MODES OF PREVENTING FERMENTATION.

Fermentation can be prevented in various ways.

I. By *Cold.* Fermentation does not take place at a temperature below 40° Fahr.

II. By *Heat.*[1] We kept grape juice for lengthened periods, unfermented and free from alcohol, by the following applications of heat :

1. The juice heated to 32° below the boiling point of 212° Fahr., poured into a new pig-skin, and tied tightly close to the contents.

2. The juice heated in an air-tight vessel in boiling water.

3. The juice freely exposed to air laden with yeast germs, and heated daily to 27° Fahr. below boiling point.

4. Juice boiled daily for one month and freely exposed to yeast-saturated atmosphere.

III. By *Inspissation*, to one-half, one-third, and one-fourth of the original bulk of the juice. One specimen after seven years contained no alcohol.

IV. By *Evaporation*, to dryness, yielding portable wine like the modern "portable soup."

[1] That the application of heat does not injure the must is shown in the following extract from Thudicum and Dupré : "The boiling of the must leaves the wine paler and of the same flavour as unboiled must." (Thudicum and Dupré, "Or. Nat. and Use of Wine," p. 650. Lond. 1872.)

V. By *much sugar.*

VI. By *Antiseptics.* Juice treated with sulphurous or salycilic acid. Juice unheated passed through tow washed with weak solution of carbolic acid. The tanning of the skin bottles of the ancients gave antiseptic action.

VII. By *Destruction and Exclusion of Yeast Germs.*

VIII. By *Sulphurization.* Casks and bottles sulphured and tightly closed. This must *never ferments.* (Muspratt, "Chem.," ii. 1119; Redding, p. 42; Sutton, "Cult. Grape Vine," pp. 163, 164.)

"ENCYCLOPÆDIA BRITANNICA" ON FERMENTATION.

In the ninth edition of the "Encyclopædia Britannica," art. Fermentation, will be found a lucid statement of the conditions of vinous fermentation, which in almost every particular accurately describes the results at which I arrived from my own experiments. The author (Professor Dittmar) says that fermentations are, chemically speaking, *non-spontaneous.* "No fermentable chemical species will ferment except in presence of water, and unless it be kept by means of that water in direct contact with some specific ferment." Grape juice when left

to itself, after having been thus clarified [*i.e.*, by filtration], may remain unchanged for an indefinite time. "Spontaneous fermentation of grape juice is always slow to begin."

"Grape juice does not ferment at temperatures lying too close to the freezing point, or exceeding a certain limit—about 140° Fahr. (60° C.)" "The most lively fermentation comes to a stop when the mixture is boiled." "Grape juice strengthened by evaporation, or addition of sugar from without, does not ferment when the ratio of water to sugar falls below a certain limit value." "Fermentation may be stopped more or less completely by addition of large or even small quantities of antiseptics."

CHAPTER V.

UNFERMENTED WINES, ANCIENT AND MODERN.

ANCIENT UNFERMENTED WINES.

AMONG the Greeks and Romans there were various kinds of unintoxicating wines. Sweet unfermented grape juice was, according to Professor Ramsay, called γλεῦκος, *gleukos*, by the former, and *mustum* by the latter.

GREEK AND ROMAN UNINTOXICATING WINES.

Mustum.

I. Πρόχυμα, *Pröchuma* (Geop. vi. 16), or *protropum* (Pliny, N. H. xiv. 11), was mustum flowing from the untrodden cluster from the pressure of the grapes on one another.

II. *Mustum lixivium*, the juice obtained before the grapes were fully trodden (Geop. vi. 16; Col. xii.

41). After treading and pressing, the marc was taken out, the edges of the husk being cut, and was again pressed, yielding

III. *Mustum tortivum* or *circumcisitum* (Cato, R. R. 23; Varr. i. 54; Col. xii. 36).

IV. Some of the mustum was used at once, drunk fresh after having been clarified with vinegar (Geop. vi. 15).

V. When it was desired to preserve a quantity of pure grape juice in the sweet state, an amphora was taken and coated with pitch within and without; it was filled with mustum lixivium (wine pressed before the grapes were fully trodden), and corked so as to be perfectly air-tight. It was then immersed in a tank of cold, fresh water, or buried in wet sand, and allowed to remain for six weeks or two months. The contents, after this process, were found to remain unchanged for a year, and hence the name of *ἀεὶ γλεῦκος*, *æi gleukos*, or *always must* (Smith's "Dic. Gr. and Rom. Ant.," p. 1202, etc., art. Wine; Pliny, N. H. xiv. 9; Cato, R. R. 120; Plut. 2 N. 26; Geop. vi. 16). There can be no doubt as to this liquor having been unfermented, for Pliny says, "Id evenit curâ, quoniam fervere prohibetur"—"This comes about through care, forasmuch as fermentation is prevented." The pitch of those days was a powerful antiseptic, its presence

in small proportion being an efficient preventive of fermentation.

MUSTUM INSPISSATED BY BOILING

was called by the Greeks ἕψημἄ, *hepseema*, or γλυξις, *gluchis* (Athen. i. 31).

VI. *Carenum* was *mustum* evaporated one-third (Pallad. Oct. tit. xviii.), which Augustine reproached the Manichæans with drinking: "Carœnum quod bibitis"—"carœnum which you drink" ("De Morib. Manichæor," § 47).

VII. *Defrutum* was *mustum* one-half evaporated.

VIII. *Sapa* was *mustum* two-thirds evaporated, equivalent to the Greek *siraeum*, the Italian *musto cotto*, and the French *sabe* (Prof. Ramsay in Smith, p. 1202).

ANCIENT SPANISH UNINTOXICATING WINE.

Pliny speaks of a Spanish wine "inerticulam"—inert, not affecting the nerves; "justius sobriam"—more justly, sober wine; "viribus innoxiam: siquidem temulentiam sola non facit"—harmless to the strength, as of itself it does not cause intoxication (N.H. xiv. 2). Columella says it was called by the Greeks "amethyston" (unintoxicating), was a good wine, "inerticula" (not intoxicating); "innoxia,

quod iners habetur in tentandis nervis, quamvis in gustu non sit hebes" (iii. 2)—harmless because guiltless of disturbing the nerves, though it was not wanting in flavour.

MODERN UNFERMENTED WINES.

OWN MANUFACTURE.

I have demonstrated (in "Unfermented Wine a Fact") that the preparation and preservation of unfermented wine is not only possible, but simple and easy; and I am using such wine now, made by me three years ago, which contains not the slightest trace of alcohol. (At the lecture in the Chapter House of St. Paul's Cathedral bottles were exhibited, some containing clear and some coloured juice, preserved by different processes, and bearing the dates August 25th, 27th, 28th and 30th, 1878; Sept. 6th, 11th, 13th, 18th, 19th, 24th, and 28th, 1878; 13th March, 1880.)

UNFERMENTED WINES, VINTAGES 1880 & 1881.

I have specimens in my possession of unfermented grape juice of the vintages of 1880 and 1881 from France, Spain, Portugal, Germany, Italy, the Colonies, London, and America (these were exhibited). The last (the American) is remarkable

for the exceptional and natural red colour, being from one of the very few varieties of grapes with this characteristic. "Samarcandi, called from the town of that name, a kind of grape with a black skin with red juice, furnishing the claret wine" (Henderson, "Hist. An. and Mod. Wine," p. 264. Lond. 1824).

CONTINENTAL RED-JUICED GRAPES.

"The Teinturier or dyer grape, from the Loire. The grapes of this wine have the peculiarity that their juice is of a dark red colour on pressing" (Thud. and Dupré, "Or. Nat. and Use of Wine," pp. 487, 488. Lond. 1872). "The Dyer grape is called *auvernat tint* in several places. At Cahars it is called *auxerrois*" (ibid. p. 488).

AMERICAN RED-JUICED GRAPES.

Vitis cardifolia riparia, or river grape (Texas), and sweet scented grape: by French immigrants called "Vigne des bottures". (ibid. p. 729). Some of the varieties of vitis cardicans, or Mustang grape of New Mexico, Texas, and Arkansas, have a blood-red pulp (ibid. p. 728).

LONDON UNFERMENTED WINE—WRIGHT.

Unfermented wine has been manufactured for a

quarter of a century by Mr. Frank Wright, Kensington (specimens shown), and by others on the continent of Europe and in America.

GERMAN UNFERMENTED WINE.

I have examined specimens of unfermented wine, delicious and refreshing, which (apart altogether from the temperance movement and the Scripture wine question) have for years been made by a wine-growing firm in the heart of a wine-growing district in Germany, and sold by them as an ordinary article of commerce with their other wines, under the name of "Pure Unfermented Wine." (A bottle of this wine, bought at a public auction in a northern city, bearing the above label, was exhibited.)

UNFERMENTED SWEET WINE.

I have also a specimen of a genuine unintoxicating wine, prepared from inspissated grape juice, and approaching the taste and flavour of Tent (minus the spirit), which I found absolutely free from alcohol. It was made by an English wine merchant some years ago, and samples were sent out preparatory to throwing it on the market, but the sudden death of the manufacturer prevented the development of the enterprise. (Bottle exhi-

bited bearing the original label, "Pure Juice of the Grape. Unfermented Wine. Absolutely free from alcohol. Imported by ——.")

UNFERMENTED GRAPE JUICE IMPORTED BY THE AUTHOR FROM THE EAST.

I have myself imported unfermented grape juice from the East for the use of my family. This keeps without any difficulty, and improves with age. The name by which I ordered it, and by which it is commonly known in many Oriental districts, is, in two Eastern languages, one of the names for "wine." "Bakmetz" was the name of the liquid unfermented grape juice referred to. This stands for "wine" in Persian and Turkish. (Meisgnien Meniniski, "Lex. Arab. Pers. Turc.," Vien. 1780. Francis Johnson, "Pers. Arab. and Eng. Dic." Lond. 1852. "Bigmaz, wine.")

(Specimens of partially solidified grape juice and liquid grape juice, both prepared by boiling, and imported from Asia Minor nearly seven years ago, were exhibited.) The liquid preparation has been kept in an ordinary bottle, sealed in the manner spirit and wine bottles usually are. I have examined both kinds repeatedly, and have discovered no trace of alcohol in either.

UNFERMENTED WINE IN PALESTINE.

At Nazareth, and in other parts of the Holy Land, the Jews still make and offer to their friends unfermented wine.

UNFERMENTED WINE IN FRANCE.

Vin boueux, commonly called vin bourra, wine described by Philip Miller, F.R.S., in 1731 ("Garden. Dic.," art. Vitis) is regularly drunk, while hot and before fermentation has set in, in certain districts in France.

UNFERMENTED WINE ON THE MOSELLE.

My late friend Professor James Miller, surgeon to the Queen, on asking an extensive wine grower on the Moselle, "Have you any unfermented wine —juice of the grape?" received for reply, "Tons, ten years old" ("Nephalism," pp. 147, 148. Glas. 1861).

CHAPTER VI.

UNFERMENTED GRAPE JUICE USED BY ANCIENTS AND MODERNS.

ANCIENT USE.

NEARLY all reliable authorities believe that the ancients were in the habit of drinking the expressed juice of the grape *before* fermentation.

TESTIMONY OF PROFESSOR RAMSAY.

Professor Ramsay, my old and venerated teacher, one of the first Latinists of his day, was accustomed to say, when describing the various ancient modes of preparing unfermented grape juice, "This might appropriately be called unintoxicating wine." "We thought we remembered hearing our old professor, William Ramsay, maintaining that the defrutum of the Romans might be called unintoxicating wine" ("Evan. Repos." Glas., June, 1877).

TESTIMONY OF J. F. BOYES.

A distinguished classical scholar, the late J. F. Boyes, of whose splendid work in Greek poetry Farrar speaks in high terms, admitted to me before he died, "the considerable ancient use of the unfermented juice of the grape."

TESTIMONIES AT DIFFERENT PERIODS.

A host of authorities attest the use of unfermented grape juice from the earliest times to the present day.

1st cent., Dioscorides ;
2nd cent., Act. Apoc. Evan. ;
4th cent., Pope Julius I. ;
9th cent., Hist. Pat. Alex. ;
13th cent., Thomas Aquinas, Marco Polo ;
16th cent., Rauwolff ;
17th cent., Effendi, Olearius, Tavernier, Parkinson ;
18th cent., Shaw, Ray, The Archbishop of Canterbury (1737), Vitringa ;
19th cent., Russell, Van Lennep, Henderson, Scholz, Forbes, Thomson, Homes, McKenzie in "National Cyclopædia," Smith in "Bib. Dic.," Lankester, M.D., F.R.S.

Dioscorides classes "Sapa" under the genus Vini ("Mat. Med.").

Apocryphal Acts of the Apostles.—"Pressing three clusters of the vine in the cup" ("Act. Apost. Apoc.," p. 184. Lips. 1851. "Act. et Martyr. Matt.")

Pope Julius I.—"Let a cluster be pressed in the cup" ("Decree to Egypt. Christ. Gratian," Pars iii.; "De Cons." Dist. ii.; Labbé, "Sacr. Conc." ii., 1267. Fl. 1757).

Hist. Patriarch. Alexand.—Raisins steeped in water and juice expressed (Renaudot, "Lit. Orient. Collec.," i. 193. Paris, 1716; Neal, "Hist. East. Ch.," ii. 156. Lond. 1847).

Thomas Aquinas.—Expression of cluster in cup (Pars iii., Quæst. lxxiv. Art. v.).

Marco Polo.—"At Shiraz, besides the wine for which that city was celebrated, a good deal of boiled wine was manufactured and used among the poor and by travellers. No doubt what is meant is the sweet liquor or syrup, called Dushâb, which Della Valle says is just the Italian Mosto-cotto, but better, clearer, and not so mawkish" ("The Book of Ser Marco Polo," i. 834. Col. H. Yule, C.B. Lond. 1871).

Tavernier.—Preparation of raisin wine by Christians of St. John ("Pers. Trav.," ii. 8. Lond. 1678). "Of the wine there are many vessels full, which are

burnt for the benefit of the poor travellers and carriers, who find it a great refreshment to drink it with water" (ibid. v. 248).

Rauwolff.—"The Turks not being allowed to drink wine by their laws, . . . press the grapes after several ways. For some, they make it into cibebs; others boil the juice of the grapes up to the consistence of honey, which they call pachmatz" ("Trav. in 1573, Leonhardt Rauwolff," Ray, ii. 69).

Effendi.—Between Scutari and Erzeroum, at Amasia, a mountain town, after enumerating forty sorts of pears, cherries, and seven sorts of grapes and quinces, he adds, "Of which a far-famed robb is made and sent to princes as a present" ("Trav." ii. 100). "The merchants of khoshab [a kind of sherbet] are 700 men." "Rest to the soul and blood to the body, is the cry by which they press their beverage" (i. 153). "Sherbet merchants." "Syrup makers, 700 boil the ighda in chaldrons, and cry it under the name of honey-grapes" (ibid. i. 155).

Parkinson.—"Sapa, defrutum, cute" ("Theatr. Bot.," p. 1557. Lond. 1640).

Pococke.—The people of Damascus have their Rinfrescoes, which are made either of liquorice, lemons, or dried grapes (ii. 25).

Vitringa.—Comment. on Isa. xlix. 26—"Must."

Barry.—"The grapes became, at first, a useful part of their aliment, and the *recent expressed juices* a cooling drink" (Sir E. Barry, M.D., F.R.S., "Obs.," c. ii. p. 27. Lond. 1775).

The Archbishop of Canterbury, 1737.—"The Lacedæmonians boiled their wine upon the fire till the fifth part was consumed" ("Arch. Gr.," ii. 364. Lond. 1775).

Clarke.—"Treated [among the Tahtars] to eggs, melted butter, nardenk, bekmess" (Dr. E. D. Clarke, "Trav. Eu., As., and Af.," ii. 313. Lond. 1816).

Henderson.—Semper mustum, &c., p. 40: "To syrupy and inspissated wines—to those which had undergone no fermentation" (p. 66).

Scholz.—Preparation of Must ("Trav. in Egypt." Phillips, Lond. 1822).

Van Lennep.—"This [grape sugar or dibs] was used much by the ancients." Missionary.

Forbes.—"Several kinds of inspissated syrup are made from grapes" (F. Forbes, M.A. "Visit to Sinjar Hills in 1838").

Hanway.—"A liquid from the juice of the grapes called dushab" (Jonas Hanway, "Hist. Br. Trav. Casp. Sea," i. 146. Lond. 1753).

Hamilton.—Boulamah: "I rather think it must have been the unfermented juice of the grape boiled down to a thick jelly" (W. J. Hamilton, "Res. As. Min., Pont. and Arm.," i. 79. Lond. 1842).

Binning.—Sheera or grape treacle, an article in common use among the peasants in Persia (R. B M. Binning, ii. 48. Lond. 1857).

Consul Brant.—"Petmes (properly pekméz), an inspissated grape juice, a common sweetmeat in the Levant" (Consul Brant at Erzeroum, 1836. Journ. R. G. S., vi., p. 204, 1836).

Wine for Mahommedans.—"At the village of Galistas, on the slopes of the Bernos (Greece), much simmered wine is made, of which Mahommedans partake" (Thud. and Dupré, "Or. Nat. and Use of Wine," p. 723).

Sir R. Ker Porter.— Grape-syrup to breakfast (ii. 694; Capt. Burton, "Unexpl. Syria," ii. 60. Lond. 1872).

Beke.—Grape-syrup or jelly, the national dish (Mrs. Beke, "Jacob's Flight," p. 102. Lond. 1865).

Lankester.—"The ancients also, there can be little doubt, were in the habit of drinking the expressed juice of the grape before fermentation" (E. Lankester, M.D., F.R.S., "Food," p. 229. Lond. 1861).

National Cyclopædia.—"The ancients, there can be little doubt, were in the habit of drinking the expressed juice of the grape before fermentation" (Art. "Vitis," xiii. 604).

Homes.—Grape-syrup is made of must that has not been pressed more than twenty-four hours. The

syrup differs in consistency according to the time it is boiled. In some countries it is boiled till thick, while in Turkey it is used in a liquid form. Nardenk is simple boiled must, without the addition of the alkaline earth that is added to the former preparation. "Here is a cooling grape-liquor not intoxicating." Raisins boiled for two or three hours to make a refreshing drink. It has no intoxicating quality. (Rev. Hy. Homes, Amer. Miss. Turk., "Bibl. Sacra," May, 1848.)

Macgregor.—"At one of the great inns on the road some new wine was produced on the table. It had been made only the day before, and its colour was exactly that of cold tea with milk and sugar in it, while its taste was very luscious and sweet. The new wine is sometimes in request, but especially among women" (J. Macgregor, *Rob Roy.* Lond. 1866).

CHAPTER VII.

ANCIENT PREFERENCE FOR SWEET, WEAK, AND DILUTED WINES.

THE ancients preferred sweet wine, inspissating it to the consistence of honey, or even thicker, and drank this largely diluted with water.

Homer, B.C. 850; Hippocrates, B.C. 400; The Archbishop of Canterbury, 1737; Barry, 1775; Harmer, 1816; Henderson, 1829; Maunder, 1848.

Homer.—Wine sweet as honey drunk diluted with twenty parts of water ("Odyssey," lib. ix.).

Hippocrates.—Not less than twenty-five parts of water to be added to one part of old Thasian wine ("De Morb.," iii. 30).

Archbishop of Canterbury, 1737.—In Greece the wine was generally mixed with water ("Archæol. Græc.," ii. 364. Lond. 1751).

Lambert Bos.—Customary to mix wine with water (Lambert Bos, "Ant. Gr.," pp. 377, 378. Lond. 1772).

Barry.—"It was usual with the ancients to dilute their wines" (Sir E. Barry, M.D., F.R.S., Pref. p. 6. Lond. 1775). "It was a general custom to dilute all their wines with water" (ibid. p. 146).

Harmer.—"Sweet wines a few generations ago were preferred in England" (Rev. T. Harmer, "Obs.," p. 149, 5th edit. Lond. 1816). "Also esteemed by the ancients" (ibid. p. 146).

Henderson.—"The ancients believed in the innocuous qualities of sweet wine." "The prevailing practice of the Greeks was to drink their wine in a diluted state." "To drink wine unmixed was held disreputable." "To drink equal parts of wine and water was thought to be unsafe." "Five parts of water to one of wine seems to have been the favourite mixture." "The taste for sweet wine seems to have always prevailed in these countries [Greece and Asia]." ("Hist. An. and Mod. Wine." Lond. 1824.)

Maunder.—"Among the Greeks and Romans the sweet wines were those most commonly in use. In preparing their wines the ancients often inspissated them until they became of the consistence of honey, or even thicker. These were diluted with water previously to their being drunk; and indeed the habit of mixing wine with water seems to have

prevailed much more in antiquity than in modern times" ("Sci. and Lit. Treasury," new ed., art. Wine).

WEAK WINE BEST.

Many ancient writers bear witness to the preference of the ancients for weak wine. Filtration of the unfermented grape juice was a favourite plan for weakening the alcoholic strength. By filtration a considerable portion of the albuminous pabulum for the nurture of the yeast plant was got rid of, and thus fermentation could not produce so great a proportion of spirit. In the words of Pliny, "The most useful wine is that which has had its strength broken by the saccus" (N. H. xxiii. 1).

CHAPTER VIII.

UNINTOXICATING DRINKS DESCRIBED AS "WINE" IN ORIENTAL DICTIONARIES.

THAT unfermented grape beverages and other unintoxicating liquors have, all along, been referred to under the generic name of "wine," I have found abundant proof in the volumes of ancient and modern authors that I have read with sole reference to this inquiry. These form a very small part of the whole field, but I can afford no more time for this research. As space will not allow a full list of authors, I merely append a few authorities in proof of each of my propositions.

IN ORIENTAL DICTIONARIES.

In standard Oriental dictionaries one of the words given as meaning "wine" has been used, both in ancient and modern times, to denote a variety of unintoxicating drinks. Meninski; Redhouse.

"*Bekmaz* and *begmez*. — Persian. 1. Vinum [wine]. 5. Succus uvarum coctione inspissatus [juice of grapes inspissated by boiling]." "Pekmāz. Turkish. Sapa, succus uvarum coctione inspissatus" (Meisgnien Meninski, "Lex. Arab. Pers. Turc. Franc." Vien. 1780). "Bèkmaz (pétmáz), grape treacle." (Redhouse, "Eng. and Turk." Lond. 1856).

These words assume various forms. Thus we have bakmets, balmets, beemes, beckmaze, pachmatz, pekmets, pekmez, petmes, pitmis, and many others.

Petmes. — "Syrup or must called petmes: the must is the juice of the grape boiled before fermentation to the consistence of a syrup" (Rob. Walpole, M.A., "Mem.," p. 289. Lond. 1817).

Beckmaze.—At Antioch "some [*i.e.*, of the grapes] boiled down and becomes beckmaze, a kind of saccharine matter very much resembling, only infinitely better, than molasses" (F. A. Neale, "Eight Years in Syr., Pal., and As. Min.," ii. 69. Lond. 1852).

Beemes.—"A syrup called beemes which is made by boiling the juice of grapes to a due consistence" (Harmer, "Obs.," p. 131).

Pekmez.– "Pekmez, which is, I believe, the juice of the grape prepared and boiled down to the con-

sistence of treacle" (R. J. Griffiths, M.D., "Trav. Eur., As. Min., and Arab.," p. 113. Ed. 1805).

Pitmis.—"At Ghiediz, the Cadiz of the ancients, the grapes are drying in the sun, and serve to make vinegar and a sort of treacle called pitmis" (Maj. Gen. Hon. G. Keppel, F.S.A., "Nar. Balcan.," ii. 241. Lond. 1831).

Pekmez.—"Pekmez, *i.e.*, inspissated grape juice" (Davis, "Anatol.," p. 143. Lond. 1874).

Petmes.—"The must of grapes made into a syrup by boiling" (Rev. F. Arundell, "Disc. As. Min.," i. 98. Lond. 1834).

OBJECTION TO THE NAME "WINE."

It has been urged that the pekmez, dipse, or dibs, which boiled unfermented grape juice is often called, was a honey or a thick jelly, a solid and not a fluid, something to be eaten, and not to be drank.

WINE MAY BE THICK AND EVEN SOLID.

Even if inspissated grape juice were a solid to be eaten, that is no reason why it should not be termed "wine." Aristotle records that many of the wines of Arcadia were so thick that they dried up in the skins, and had to be scraped off with a

spoon, the scrapings being dissolved in water ("Met.," iv. 10).

Absolutely solid wine is not unfrequently met with.

SOLID WINE AT POMPEII.

"We were shewn several jars, whose contents were solid, and which, at the time of the eruption, were full of wine" (Capt. Sutherland, "Tour to Const.," p. 81. Lond. 1790).

PORTABLE WINE AND PORTABLE SOUP.

We have portable wine as we have portable soup.

Portable Soup.—Among the useful articles for travellers in the East is "portable soup" made in cakes (Prof. Palmer, "Des. Exod.," p. 138. Lond. 1871). In Asia Minor flour, with savoury additions, is made into a sort of sausage shape, and being hung up to dry keeps a long time, and makes when dissolved a palatable, nutritious soup (Arundell, i. 98).

Portable Wine. — At Cæfr-Injey, Mr. J. Silk Buckingham was treated to "a very curious article, probably resembling the dried wine of the ancients, which they are said to have preserved in cakes" ("Trav. Arab Tribes," p. 140. Lond. 1825).

DRIED WINE AND DRIED MILK.

We have dried wine in the same way as we have dried milk. The latter is a common article of consumption in many parts of the East. "Dried leben [*i.e.*, sour milk] is sent to Damascus and other places from Shiba" (Robinson, "Bib. Res.," iii. 416, 2nd edit. Lond. 1856). In Persia Capt. Burton found milk made into balls, and hardened in the sun ("Pilgrim. to El Medinah," iii. 93. Lond. 1855). The Turkomans put on the tops of their tents large white masses of sour curd, expressed from buttermilk, and set to dry. "This, broken down and mixed with water, forms a very pleasant acidulous drink" (J. B. Fraser, "Journey into Khorasàn," p. 283. Lond. 1825).

"TEA" INCLUDES BOTH A SOLID AND A LIQUID.

There are many solid articles which we are said to drink. Tea is a familiar example.

SUBSTANCES BOTH EATEN AND DRANK.

A moment's reflection will call to mind instances of our eating and drinking the same substance. The Arabs eat and drink adjoue. "Adjoue, a date paste made by pressing the dates, when fully ripe,

into large baskets so forcibly as to reduce them to a solid cake, is eaten as a part of the daily food of the people. In travelling it is dissolved in water, and thus affords a sweet and refreshing drink" (Burckhardt, "Not. Bed. and Wahab.," i. 57. Lond. 1831).

WINE EATEN AND DRANK.

The eating and drinking of wine is not unknown to sojourners in the East. Thevenot supplies an apt illustration of this. "Chio yields plenty of good wine, but so thick that many do not like it because, as they say, they must *both eat and drink it*" (De Thevenot, "Travels," part i., p. 101. Lond. 1687).

GRAPE JUICE HEATED YIELDS A LIQUID.

Even if it were inaccurate, which I have just shown is not the case, to call thick unfermented juice of the grape "wine;" there is from the heating of the juice, in addition to the so-called "jelly," an unfermented LIQUID.

LIQUID PACHMATZ DESCRIBED IN 1575.

"They have two sorts of this rob, one very thick, and the other somewhat THINNER." "The latter

they use themselves, mix it sometimes with water, and give it to drink [instead of the julep] to their servants" (Leonhart Rauwolff, "Ray II.," p. 69, 70).

PREPARATION OF THIS LIQUID GRAPE JUICE.

This latter, the liquid form, is prepared in different ways. One method is described by Greek and Turkish fruiterers, who well know the difference between the thick and the thin preparations. This is what they concur in telling me. That bakmetz and balmetz are both boiled grape juice. To make balmetz, the honey of grapes, the boiled juice is put in the sun and roasted until it is quite thick.

Bakmetz, the thin form, is grape juice pressed and boiled. It remains, they say, quite fluid, "liquid like water," to use their own phrase. It is kept in jars, with a lid to keep the dust out. The people say of each of these, "it will keep as long as you like, and improves with age."

I have made the liquid myself in another and simpler way, viz., by letting the boiled juice settle, and decanting off the supernatant fluid layer.

NARDENK, A SIMPLE FLUID UNFERMENTED WINE.

Nardenk from grapes (for nardenk may be made

from pomegranates too) is the simplest of all unfermented grape wine. The whole process consists in filtering and boiling the juice down to a thin liquid.

LIQUID UNFERMENTED WINES MADE BY AUTHOR.

There is little difficulty in preparing unfermented wine, of almost any degree of consistence, from grapes, by the application of heat. (Several specimens of fluid unfermented wines, all prepared by the author, were here shown.)

CHAPTER IX.

UNINTOXICATING DRINKS DESCRIBED AS "WINE" IN MODERN DICTIONARIES, CYCLOPÆDIAS, ETC.

IN different modern dictionaries, cyclopædias, lexicons, &c., sweet or unfermented juice of the grape is given as the meaning of "Must," or "new wine."

Lyttleton, Worcester, Webster, Wright, Hilpert, Littré, Descherell, Scheller, Flügel, Freund, Longmuir, Nuttall, Collins; Cycs.: Lond., Americ., and Pop.; Lex., Donnegan; Dic. de l'Académie Française; Robertson, Stephanus, Du Fresne.

Lyttleton.—New wine close. shut up and not suffered to work ("Lat. Dic." Lond. 1678).

Worcester.—The sweet or unfermented juice of the grape, New Wine ("Dic.," p. 945. Bost. 1860).

Webster.—New wine unfermented ("Dic.").

Wright.—Wine pressed from the grape, but not fermented (T. Wright, F.S.A., "Roy. Dic. Cyc." Lond.).

Hilpert.—Wine pressed from the grape, but not fermented, New Wine (Dr. J. L. Hilpert, "Dic., German." Lond. 1846).

Littré.—Vin nouveau, non fermenté, "New wine, not fermented" ("Dic. de la langue Français." Paris, 1863).

Descherell.—Vin qui vient d'être fait et qui n'a point encore fermenté, "Wine which has just been made, and which has not yet fermented" (Paris, 1861).

Scheller.—Wine just pressed and not strained ("Lex." 1835).

Flügel.—Unfermented wine ("Dic., Germ. Eng." 1853).

Freund.—New or unfermented wine (Wörterbuch. Leips. 1845).

Longmuir.—New wine unfermented ("Dic.," 1877).

Nuttall.—Wine from the grape, not fermented ("Dic.," 1878).

Collins.—Wine pressed from the grape, but not fermented ("Hous. Dic. Lang.," 1871).

Cyclopædias : London, American, and Popular.—Juice when newly expressed, and before it has time to ferment, is called Must, and in common language sweet WINE.

Donnegan. — Gleukos : new, unfermented wine, must (Lex., 1826).

Dict. de l'Académie Française.—Vin doux, vin qui n'a point encore cuvé, " Sweet wine which has not yet fermented " (Art. " Vin").

Ainsworth.—Wine coming from the grape before pressing—vinum lixivium (" Lat. Dic.").

Haigh.—Vinum, " wine, drink " (" Lat. Dic.," 1861).

Robertson.—New wine—mustum. *Wine* yet on the tree—vinum pendens (Wm. Robertson, M.A., " Phras. Gen." Cantab. 1693).

Stephanus. — Vinum pendens, " hanging wine " (" Thesaurus." Lond. 1734).

Du Fresne. — Mustum, vinum pede pressum, " Must, wine pressed by the foot " (" Glossar." Paris, 1736).

Boag.—" Must." New wine, pressed from the grape, but not fermented (" Imper. Dic. Ed.").

CHAPTER X.

UNINTOXICATING DRINKS DESCRIBED AS "WINE" BY EASTERN TRAVELLERS.

MANY Eastern travellers have spoken of unfermented grape juice as "wine."

Effendi, 1630; Thevenot, 1687; Gobat, 1834; Ainsworth, 1842; Macgregor, 1866.

Effendi.—It (*i.e.*, unfermented grape juice boiled down to a third) is called triple WINE ("Travels," i. 247. Lond. 1846).

Thevenot.—"Their WINE of Dry Grapes," prepared by the Sabæans, "by steeping dried grapes in water, which they press" ("Trav. Levant," part ii. p. 164. Lond. 1687).

The Bishop of Jerusalem.—"The WINE is the juice of dried grapes with water" ("Journ. in Abyss.," p. 345. Lond. 1834).

Ainsworth.—"The consecrated WINE" just de-

scribed as being raisin water (W. H. Ainsworth, "Trav. and Res.," ii. 210. Lond. 1842).

Macgregor. — "New *wine* made only the day before. Very luscious and sweet."

CHAPTER XI.

UNINTOXICATING DRINKS DESCRIBED AS "WINE" IN LITERATURE.

LITERATURE, ancient and modern, affords numerous instances of unfermented or unintoxicating grape juice being called "wine."

Hippocrates, B.C. 400; Plautus and Cato, B.C. 200; Dioscorides, Varro, Columella, Celsus, Bishop Papias, 1st cent.; Julius I., 337; Augustine, 390; Proclus, 5th cent.; Gerarde, 1636; Parkinson, 1640; The Bishop of Norwich, 1660; Robertson, 1693; The Bishop of Rochester, F.R.S., 1702; Stephanus, 1734; E. Chambers, F.R.S., 1750; The Bishop of London, 1778; The Archbishop of Armagh, 1796; Harmer, 1816; Dr. Adam Clarke, 1836; Professor Moses Stuart, 1822; Ure, 1836.

Hippocrates, in his work on Diet, says, "Glukus is less fitted to make the head heavy . . . than other wine (*oinōdeos*)" ("Temp. Bib. Com.," p. xxxvi., 5th edit.).

Plautus. — *Vinum* cogere, "To gather *wine*" ("Trin." ii. 4, 125).

Varro.—Vinum legere, "To gather *wine*" (LL. iv. 17).

Cato.—Vinum pendens, "Hanging *wine*" (R. R. 6 ext.)

Dioscorides.—Sapa *Vini* ("Mat. Med.")

Columella. — Inerticula . . . boni *vini*, "Unintoxicating . . . good wine."

Celsus.—Myrti baccas legere, ex his *vinum* exprimere, "Gather the berries of the myrtle, from these express *wine*."

Bishop Papias.—Et unumquodque acinum dabit viginti quinque metretas *vini*, "And each grape will give twenty-five measures of wine" ("Bibliothec. Veter. Patr." Gallandi. Ven., i. 317; Migne, "Pat. Curs. Compl. Ser. Gr.," v. 1258).

Julius I.—Vinum expressum, "Expressed wine" [just expressed and before it could have fermented] ("Egypt. Decree," A.D. 337).

Augustine. — Vinum coctum, "Cooked wine" ("De Mor. Man.," § 47).

Proclus. — Ekthlibontes oinon, "Squeezing out the *wine*" ("Poet. Min. Gr.," p. 354. Leips. 1823. Note on line, p. 11, "Works and days of Hesiod").

Gerarde. — "The juice of grapes being newly pressed forth is called mustum or new *wine*" ("Herball").

Parkinson.—"The juyce or liquor pressed out of the ripe grapes is called *Vinum*, Wine" ("Theat. Bot.").

Bishop of Norwich, 1660.—What doth He in the ordinary way of nature, but turn the watery juice that arises up from the root into *wine?* (Jos. Hall, D.D., Contemp.)

Bishop of Rochester, *F.R.S.*, 1702.—Cute or unfermented *wine* (Sprat, "Hist. R. S.," p. 193. Lond. 1702).

Bishop of London, 1778. — The fresh juice pressed from the grape, which was called oinos ampelinos, *wine* of the vine (Lowth on Isa. v. 2).

Archbishop of Armagh, 1796. — New Wine. Must of the last vintage, to preserve the sweetness of which the ancient writers give rules (Newcome, "Eng. Tr. Gr. Script.," i. 491, note 13. Dub. 1796).

E. Chambers, *F.R.S.*—Vin doux [sweet wine] is that which has not yet fermented ("Cyc.," 6th edit., 1750).

Harmer. — *Wine* just pressed out from the grapes ("Obs.").

Dr. Adam Clarke.—On Gen. xl. 11. From this we find that *wine* anciently was the mere expressed juice of the grape, without fermentation. This was anciently the *yayin* of the Hebrews, the *oinos* of the Greeks, and the *mustum* of the Latins ("Com.," i. 239. Lond. 1836).

EXAMPLES FROM THE POETS.

Poetry furnishes many examples. Four will suffice.

ANACREON, 510 B.C.

"Μόνον ἄρσενες πατοῦσι
σταφυλὴν, λύοντες οἶνον."

"Mónon ársenes patoûsi
Staphuleèn lúontes oînon."

"Only males tread the grapes,
Setting free the WINE."—*Ode* lii.

OVID.

"Vixque merum capiunt grana quod intus habent."

"And scarce the grapes contain the *wine* they have within."
Trist. liv. iv. ch. 6.

GOETHE.

"Lastende Traube
Stürzt ins Behalter
Drängender Kelter,
Stürzen in Bächen
Schäumende *Weine*."—*Faust.*

"And, bending down, the grapes o'erflow
With *wine* into the vat below,
Which gushing, flows in foaming streams."
Trans. by Filmore.

YOUNG.

"As when full ripen'd teems the vine,
The generous bursts of willing *Wine*
Distil nectareous from the grape impressed."
Imperium Pelagi.

CHAPTER XII.

MODERN VARIETIES OF UNFERMENTED WINE.

In days of old classic authors, and in more recent times English and foreign writers, have described different varieties of unfermented wine.

Gerarde, 1598; Effendi, 1630; P. Miller, F.R.S.; Parkinson, 1640; Willis, 1681; E. Chambers, F.R.S., 1750; Smith, 1842.

GERARDE ON CUTE AND OTHER WINES.

He quotes Pliny, Columella, Palladius, and Leontius, and tells us how to prepare hepsema, sapa, defrutum, carœnum, and "Cute, or boiled wine." He describes the last named as good for the cough and shortnesse of breath ("Herbal," ed. Johnson, p. 878. Lond. 1636).

EFFENDI ON MAKERS OF THE TRIPLE WINE (MUTHELLETHJIAN).

"It was composed first by Imán Zafer, and is made in the following way: Must is boiled in a kettle, wherein a stick is put, to the height of the must, with three notches in it. In the course of boiling two of these notches appear, but the *wine* is not perfect until it has boiled down to the third notch" (Evliya Effendi, "Travels," i. 247. Lond. 1846. Son of the chief of the goldsmiths at Constantinople, born 1611).

UNFERMENTED WINE AT TREBIZOND.

"The must of the raisins of Boydepeh is sweet, and gives no headache to those who drink it; the sherbets called the triple, the muscat, and the clove wine are the best" (ibid. ii. 48).

MILLER.

"Wine is distinguished into (1) Mère-goutte ('mother drop'), which is the virgin wine, or that which runs of itself out of the tap of the vat, before the grapes are trodden. (2) The Must." The above were unfermented. "(3) Pressed Wine, (4)

Draught Wine." These two last were fermented (P. Miller, F.R.S., "Gard. Dic.," 8th edit. 1768).

"Wines are also distinguished into Vin doux, or sweet wine, which is that which has not worked or boiled; Bourru, that which has been prevented working by placing casks into cold water." These two were unfermented (ibid., art. Wine).

PARKINSON ON SAPA, ETC.

"Of it [*i.e.*, the juice of the grape] is made both sapa and defrutum, in English, Cute; that is to say, boyled wine, and both made of mustum, new wine; the latter boyled to the half, the former to the third part" (Parkinson, "Theatr. Botanic," p. 1557. Lond. 1640).

WILLIS ON UNFERMENTED RHENISH.

"A portion of Rhenish Wine, or others, very fermentable, is laid up and hindered from fermenting, from whence it is a perpetual Must, commonly called Stum" (Dr. Thos. Willis on "Fermentation," i. 24. Lond. 1681).

CHAMBERS.

Wine distinguished in France into mère-goutte,

virgin wine, running of itself out of a tap in the vat; must; sweet wine; vin doux, that which has not yet worked or fermented ("Cyc.," art. Wine. Lond. 1738).

SMITH.

"Dictionary of Gr. and Rom. Antiquities." 1842.

CHAPTER XIII.

UNFERMENTED AND FERMENTED PALM WINE.

EASTERN travellers and scholars have distinguished unfermented from fermented palm juice, most of them designating both kinds "palm *wine*."

Mohammedan Traveller, 9th cent.; Herbert, 1638; Barry, 1775; Durand, 1806; Haafner, 1806; Forbes, 1813; Kidd, 1833; Professor Royle; Schomburgh, 1843; Binning, 1857; Symonds, 1854.

The *Mohammedan Traveller*, speaking of palm wine, says, "This last liquor is white, and when drunk fresh is sweet like honey, and has the taste of cocoa-nut milk. If kept some time, it becomes as strong as wine; but after some days changes to vinegar" ("Voyage by a Mohammedan Traveller in the 9th Cent.," Kerr's Collect. i. 53).

Sir Thos. Herbert.—"The Wine, or Toddy, is got by wounding or piercing the tree (toddy) and putting a jar or pitcher underneath" ("Travels," p.

29. Lond. 1677). "In the Mauritius the date tree yields liquor out of the soft pulp not unlike the Toddy, in colour and relish not unlike Must or Sweet Wine. In two days it turns acid" (ibid. p. 381).

Barry.—"The Indians discovered similar virtues in their Palm trees. They first made incisions in the bark with a view to drink the cooling liquor which distilled from them" (Sir E. Barry, M.D., F.R.S. "Obs.," p. 28. Lond. 1775).

Durand.—"Gasama is a large village which contains a prodigious number of palm trees, with the WINE from which the inhabitants carry on a considerable trade. It is a liquor which runs from the top of the tree by means of an incision, and is of the consistence and colour of skimmed milk. It ferments like champagne. It is sweet when it issues from the tree, but becomes sour in a few days and speedily changes to vinegar" (Gov. Durand, "Voyage to Senegal," p. 167. Phillips, Lond. 1806).

Haafner.—"Our drink was the delicious cocoa-nut, or *fresh palm wine*" (J. Haafner, "Travels in Ceylon," p. 3. Sir R. Phillips and Co., 1821).

Professor Kidd.—"In the 'Nouv. Dict. d'Hist. Nat.' viii. p. 297, it is stated, that as in other palms, if the extremity of the sheath from whence the flowers of the cocoa arise be cut off when young, a white

sweet liquor distils from it, which is used extensively as a beverage in India under the name of *palm wine;* . . . that if exposed to the air it acquires vinous properties at the end of twelve hours, and at the end of twenty-four hours becomes vinegar. Almost all that has been said of the cocoa tree might be repeated of the date tree" (J. Kidd, M.D., F.R.S., "Bridgewater Treatise," pp. 184, 185, 6th edit. Lond. 1852).

Professor Royle.—"Whether fermented or not, known as *palm wine*" (Kitto, "Cyc.," art. Tamar).

Schomburgh, speaking of the Mauritia flexuosa, says, "At certain seasons the Indians of the Savannahs and the Warran of the Orinoco draw from it a liquor of vinous taste, which, *when fermented*, is intoxicating" (R. Schomburgh, K. R. E., "Visit to Source of the Takutu, Brit. Guiana, in 1842," pp. 24, 25. Journ. R. G. S. xiii., 1842).

Binning.—"The liquor called toddy, from the Hindu name *tâdee* or *târee*, is obtained from various kinds of palms, particularly the cocoa, Palmyra, jaggery, and date. It is the sap of the tree, procured by cutting off one of the long leaves, and fastening an earthen pot to the stump; in the morning a quantity of fluid is found collected in the pot. When drunk fresh it is not unlike ginger beer; but if left for some hours exposed to the sun,

it ferments and turns sour, and in this state possesses considerable intoxicating power" (R. B. M. Binning, Madras C. S., "Travels in Persia," i. 57. Lond. 1857).

Forbes.—"The fermented juice of the palm tree is more powerfully intoxicating than that of the vine. . . . A small incision being made at the end, there oozes in gentle drops a cool, pleasant liquor called Tarce or Toddy, the *palm wine* of the poets. This when first drawn is cooling and salutary, but when fermented and distilled produces an intoxicating liquor" (J. Forbes, F.R.S., "Oriental Mem.," i. p. 24. Lond. 1813).

Symonds, speaking of the Palmyra palm, says, "In Jaffna, a distinction is made between toddy and sweet toddy. The former, called by the Tamils culloo, is the fermented ; the latter is the unfermented juice" (P. L. Symonds, "The Commercl. Prod. of the Veg. Kingd.," p. 26. Lond. 1854). Of the Gonuti palm, Symonds writes, "The principal production of this palm is toddy, from Sanskrit Táde. When newly drawn the liquor is clear, and in taste resembles fresh must. In a very short time it becomes turbid, whitish, and somewhat acid, and quickly passes into the vinous fermentation, acquiring an intoxicating quality" (ibid. p. 248).

CHAPTER XIV.

PRINCIPAL USE OF GRAPES IN THE EAST NOT FOR FERMENTED WINE.

It has generally been supposed that the principal use of grapes in the East was to make fermented wine. This is an error.

In Palestine and other Scripture regions, only a small part of the vintage is thus employed. The chief use of the grapes is as food in its natural form, most of what remains being eaten or drank in the form of unintoxicating solids or liquids.

Voyager in Arabia, Tavernier, Parsons, Walpole, Scholz, Laurent, St. John, Robinson, Hamilton, French, Wortabet, Lankester, Burnaby.

Arabian Voyager.—"Arabians make no wine. Very good grapes at Moka, of which the Arabians never make wine" ("A Voyage to Arabia the Happy," p. 121. Lond. 1730).

Tavernier, speaking of the country between the Tigris and Taurus, says, "Every inhabitant has his

quarter of his vineyard where they dry their grapes ; for they make no wine" (Baron Tavernier, "Pers. Trav.," bk. iii. c. iv. p. 108).

Parsons, speaking of Bylan, Kamarut, says, "On the neighbouring mountains grow some of the finest grapes in Turkey, and as they do not make wine, they sell them in the season for a farthing a pound" (Abrm. Parsons, "Travels," p. 22. Lond. 1808).

Walpole.—"The vineyards here [near Tousla, in Asia Minor] are not cultivated with the intention of making wine; the grapes are consumed by the Turks, both as ripe fruit and when dried into raisins. A syrup is also made" (R. Walpole, M.A., "Mem.," p. 133. Lond. 1817). "Grapes grow in abundance at Rosetta, but little wine is made in Egypt" (ibid. p. 388). "A great quantity of grapes is produced in the neighbourhood [*i.e.*, of Antioch]. They are used for food, converted into Dipse, or dried as raisins" (Rev. R. Walpole, "Travels," p. 134. Lond. 1820).

Scholz.—"The vine blossoms in May, and the grapes are ripe in August. They are usually dried, or a kind of decoction made of the must, for only the Christians make wine" (Dr. Scholz, "Trav. Egypt and Lybia." Phillips, 1822).

Laurent.—"At Lygurio the vines and ripest

grapes were picked and dried in an oven for winter food" (P. E. Laurent, "Recoll. of Classic Tour in Gr., Turk., and Italy," p. 131. Lond. 1821).

St. John.—"All the produce of the vineyards was not appropriated to the making of wine, great quantities of grapes (Geop. iv. 15; Cato 7; Col. xii. 39; Pallad. ii. 22) being preserved for the table or converted into raisins" (J. A. St. John, "Man. and Cust. of Anc. Gr.," ii. 354. Lond. 1842).

Robinson.—"The produce of the vineyard at Hebron is celebrated through Palestine. No wine, however, or Arak, is made from them except by the Jews, and this not in great quantity" ("Bib. Res." Lond. 1856). "The grapes at Hasbeiya are mostly eaten or made into raisins; while some are trodden and the juice boiled down to form the syrup called dibs" (ibid. ii. 381).

Hamilton.—"The grapes at Aineh-Ghieul are of a small black kind, rather astringent, and chiefly used in the preparation of pekmes" (W. J. Hamilton, F.G.S., "Res. As. Min. Pon. and Armenia," ii. 369. Lond. 1842).

French.—"In Cordova, in South America, the grape is not cultivated for vintage" (J. O. French on La Riàja. Journ. R. G. S., ix. p. 281, 1839).

Wortabet.—"Considering Syria is a grape-growing country, the reader will be astonished to learn

that comparatively little wine is made in it" (G. M. Wortabet, "Beyrout, Syria, and the Syrians," i. 131. Lond. 1856).

Lankester.—"The fruit of the vine is used as an article of diet in several ways, and its agreeable sweet acid flavour, when ripe, has always rendered it a very desirable food when fresh" (E. Lankester, M.D., F.R.S., "Food," p. 229. Lond. 1861).

Maj.-Gen. Burnaby.—"Near Kowakoli many grapes, which are very large. . . . The grapes are either eaten, or the unfermented juice is kept to sweeten pastry" ("On Horseback through As. Min.," i. 169, 3rd edit. Lond.).

CHAPTER XV.

GRAPES ALWAYS TO BE HAD FRESH.

OLD and recent authorities are at one as to the possibility of keeping grapes fresh from one season to another.

Thevenot, Niebuhr, Gerarde, Burckhardt, Eton, Kotzebue, Chandler, Walpole, Ferrier, Lennep, Mounsey, Robinson, Hanway, Tighe, Burnaby, Bernier.

Thevenot.—"They eat grapes in Surat from the beginning of Feb. to the end of April" ("Trav. Levant," part iii. p. 16. Lond. 1687).

Niebuhr.—At Sana, in Yemen: "Here are more than twenty different species of grapes, which, as they do not all ripen at the same time, continue to afford a delicious refreshment for several months. The Arabs likewise preserve grapes by hanging them up in their cellars, and eat them almost

through *the whole year*" ("Trav. Arab." ed. Heron., i. 406. Ed. 1792).

Gerarde.—"Grapes may be kept the *whole year*, being ordered after the same manner that Joachimus Camerarius reporteth. You shall take, saith hee, the meale of mustard seed, and strewe it in the bottome of any earthen pot well-leaded; whereupon you shall lay the fairest bunches of the ripest grapes, which you shall cover with more of the aforesaid meale, and lay upon it another sort of grapes, so doing until the pot be full. Then shall you fill up the pot to the brimme with a kind of sweet wine called must. The pot being very close covered, shall be set into some cellar or other cold place. The grapes you may take forth at your pleasure, washing them with faire water from the powder" ("Herball," p. 877).

Burckhardt, at Djidda, found, in July, grapes of the best kind, with which the mountains behind Mokka abound ("Trav. Arab.," i. 54. Lond. 1829).

Eton.—"From the ceiling hung, suspended by threads to the beams and rafters, an immense quantity of apples, pears, and large bunches of delicious grapes, which they thus preserve in the open air, without any preparation, all the winter through" (W. Eton, "Survey of Turk. Emp.," i. 224, 2nd. edit. Lond. 1799).

Murphy.—"The Granadians preserve grapes from one season to another with their stores of dried fruits; and they possess the art of preserving grapes sound and juicy, *from one season to another*" (J. C. Murphy, "Hist. Mahomet. Emp. in Spain," p. 298. Lond. 1816).

Kotzebue.—At Tiflis "good grapes are to be had nearly throughout the year" (Moritz von Kotzebue, "Narr. Jour. Persia," p. 58. Lond. 1819).

Chandler.—At Smyrna "large and heavy bunches [*i.e.*, of grapes] are hung in strings, and preserved in the shops for sale in the winter" (R. Chandler, D.D., "Trav. As. Min. and Gr.," i. pp. 78, 79, 3rd edit. Lond. 1817).

Walpole.—"At Aracova, in Greece, I tasted grapes which had been preserved during the winter by filling the jar in which the bunches were placed with wine" (R. Walpole, M.A., "Trav. Eur. and Asiat. Turk.," p. 311. Lond. 1817).

Ferrier.—In Kabul, "in May, one may purchase the grapes, pears, apples, quinces, and even melons of the bygone season, then *ten months* old" (Wm. Ferrier, French General, "Car. Journ. Pers., Afgh., Turkist., and Beloochist.," p. 319. Tr. Capt. Jesse, ed. H. D. Seymour, M.P., 2nd edit. Lond. 1857).

Lennep.—At Tocat "we noticed in every apartment a shelf on the top of the cupboard, which

usually runs all round the room, and which is commonly employed to support rows of fruit, that keep fresh longer in this way than in any other. . . . Dried fruit is offered in winter [the author is describing dinner parties at Tocat], but there are pears, apples, and even grapes, which *keep through the severest season* by hanging them in clusters from the ceiling of a well-closed room. There are, indeed, varieties of these fruits which are not fit to eat until they have been kept till January, February, and even March" (H. J. Lennep, D.D., "Trav. in Litt. Kn. Pts. As. Min.," i. 222–232. Lond. 1870).

Mounsey.—In a village near Sultania, in Persia, he "had a great treat to-day in the shape of some grapes. In this dry atmosphere they can be kept, it seems, for *almost any length of time*" (A. H. Mounsey, F.R.G.S., of H.M.'s Embassy, Vienna, "The Cauc. and Pers.," p. 117. Lond. 1872).

Robinson.—"Grapes at Damascus ripen early in July, and are said to be found in the market during eight months" ("Bib. Res.," iii. p. 453, 2nd edit. Lond. 1856).

St. John describes various modes of preserving grapes a long time ; such as by cutting the grapes or the clusters separately, dipping them in pitch, and laying them on pulse, balm, hay, or straw (Geop. iv. 15, 4). Sometimes the branches were

kept suspended after being dipped in sweet wine. Sometimes grapes were preserved in pitch coppers, in sawdust. Some plunged the fruit in boiling sea water, and laid it on barley straw. Others suspended the grapes in granaries, when the dust protected them from the air ("Man. and Cust. Anc. Gr.," i. 356. Lond. 1842). Grapes were also kept in honey, in rain water that had been boiled, &c. (ibid. ii. 356–357).

Hanway.—Grapes preserved in sand were said to be sent 1,200 miles from Astrachan every three days during the season (Jonas Hanway, "Hist. Acct. Brit. Tr. Casp. Sea," i. 107. Lond. 1753).

Tighe.—"Some [grapes] on the cottage beam in closer ranks
Await the frugal winter; some, with coat
More close, preserve the wholesome pulp, and sleep
In beds of sand within the porous jar,
Ere long to navigate the distant waves
Secure, and crown an hyperborean feast."
("The Plants. Vine," p. 52. Lond. 1811.)

Burnaby.—Near Kowakoli "the inhabitants preserve the fruit [grapes] throughout the winter by hanging it up in cellars" ("On Horseback thr. As. Min.," i. 168, 169, 3rd edit. Lond.)

Bernier. — In England, grapes eight months after they have been gathered are sold every year,

which have been transported from the continent and kept packed in sawdust or cotton, as 250 years ago they were sent from Persia to India wrapt in cotton, and there sold throughout the year (Bernier, "Trav. in Mogul," i. 284. Lond. 1826).

Thus *Unfermented Wine could be prepared fresh at any season of the year.*

SUMMARY OF FACTS.

1. Grape juice preserved unfermented and unintoxicating both as a liquid and a solid.

2. A variety of ancient unintoxicating wines described by classic authors.

3. Nearly all authorities agree that the ancients were in the habit of drinking the expressed juice of the grape *before* fermentation.

4. Modern use of unfermented grape juice abundantly attested.

5. Ancients preferred sweet, weak wine, freely diluted.

6. Unintoxicating drinks called "Wine" at all periods in Oriental dictionaries; in modern dictionaries, cyclopædias, &c.; by Eastern travellers; and in general literature, ancient and modern.

7. Varieties of Unfermented Wine described by modern authors.

8. Unfermented and Fermented Palm Juice, both called "Palm Wine."

9. Grapes in the East not chiefly used to make Fermented Wine.

10. Fresh grapes preserved from one season to another, and thus fresh Unfermented Wine always to be had.

CHAPTER XVI.

WORDS TRANSLATED WINE IN THE BIBLE.

THE OLD TESTAMENT.

יַיִן—YAYIN.

YAYIN occurs 141 times. In some texts, *yayin* meant an intoxicating drink; as in Jer. xxiii. 9, "I am like a drunken man, and a man whom *yayin* hath overcome." In other texts, *yayin* signified an unintoxicating drink; as in Jer. xlviii. 33, "I have caused *yayin* to fail from the wine press, none shall tread with shouting;" and in Isa. xvi. 10, "The treaders shall tread out no *yayin* in their presses." Here it represents the unfermented juice of the grape before fermentation could have begun.

Yayin is sometimes condemned. It is said to be a "mocker" (Prov. xx. 1). In Deut. xxxii. 33, it is called "the poison of dragons and the cruel

venom of asps." I have never read a clearer description of the phenomena of vinous fermentation than is given in Prov. xxiii. With the exception of one kind of grape grown now in Europe and America, the juice of grapes is colourless. Unsophisticated red alcoholic wine is made in wine-growing countries by fermenting the dark skins with the juice, the alcohol extracting the colouring matter and giving the red colour to the wine. The phrase "it moveth itself aright" is an accurate and graphic description of the rising of the bubbles of carbonic dioxide during the process of fermentation.

Though in the texts where *yayin* evidently denoted an intoxicating drink we never find God's approval of it, *yayin* is sometimes spoken of in terms of approbation, as in Isa. lv. 1, "Come buy *yayin* and milk without money and without price."

Yayin is thus clearly a generic word for "wine" fermented and unfermented, intoxicating and unintoxicating, poisonous and harmless.

תִּירוֹשׁ—TIROSH.

Tirosh occurs thirty-eight times, and is rendered in twenty-six instances by "wine," in eleven by "new wine," and once by "sweet wine." In thirty-seven of these references *tirosh* is described as a

blessing, and it is never associated with danger or sin. The only apparent exception to this is the passage in Hos. iv. 11, "Whoredom and *tirosh* take away the heart." But this is a taking away or alienation of the affections from God by absorption of all the faculties, irrespective of the nature of the object engrossing the heart.

Tirosh is generally linked with דָּגָן *dahgan* ("corn"), and יִצְהָר, *yitzhar* (translated "oil," though more probably it ought to be "olive fruit"). As *tirosh* is spoken of as being gathered (Deut. xi. 14), as being trodden (Mic. vi. 15), and as being found in the cluster (Isa. lxv. 8), it seems only reasonable to infer that it denotes a solid fruit, not a liquid wine. This rendering is the more appropriate, as the three leading natural productions of Palestine are the produce of the field, the vineyard, and the olive-grove. Many travellers describe the country, in Mr. Buckingham's words, as cultivated with olives, corn, and vines. Some still hold that *tirosh* was a liquid, but there is a very general consensus of intelligent opinion that, whatever its form,[1] it was

[1] Even if *tirosh* is held to denote a liquid in Deut. xiv. 23, that would not necessarily be fermented. The following refers to tithes of an unfermented liquid: "In Herzegovina the tithe-farmer exacts his eighth of the grapes when carried off as must" (A. J. Evans, "Through Bos. and Herzegov.," p. 329. Lond. 1876).

unfermented and unintoxicating. It has been objected to the solidity of *tirosh* that it "shall make the maids cheerful" (Zech. ix. 17). This objection, however, would equally apply to corn, which we are told shall have a similar effect on the young men (ibid.), in which case we should be driven to transform *dahgan* "corn" into *dahgan* "whiskey!"

Unfortunately for this objection, the art of distilling ardent spirit was not known till the eleventh century.

The cheering influence *dahgan* and *tirosh* are said in the text to exert is literally true, in the best sense of the expression. Speaking of the Bedouin Arabs, De Saulcy says, "Truly miraculous is the effect of a supplemental ration of flour and oil on the heart of a Bedouin! The fellows are as gay and joyous as if each had drank a bottle of champagne!" ("Narrat. of a Journ. round the Dead Sea," i. 200, new edit. Lond. 1854).

שֵׁכָר—SHEKAR.

Shekar occurs twenty-three times, and is usually translated "strong drink." In twenty-one instances, in remarkable contrast to *tirosh*, it implies an intoxicant, and is spoken of in language of con-

demnation. There can be little doubt that "strong drink," as we understand the term, is an inaccurate translation. Our own word "sugar" is evidently the same word as *shekar*, and "sweet drink" would be a much more appropriate rendering. *Saccar* or *shakar* stands for "sugar" in Persian ("Dict. and Gram." by Angelo Palmer, 1684; Johnson, 1852; Forbes, 1861; E. H. Palmer, 1876), and *shakar* in Hindustanee (Shakspear, 1849; Forbes, 1857). In Turkish, "sugar" is *shèker* or *sukker* (Redhouse, 1856). Mr. Knight tells us that *shechar* is the word for "sugar" at Tchavnak Kalessay ("A Diary in the Dardan.," p. 31. Lond. 1849). According to Effendi, born 1611, *sheker* was Turkish for "sugar," and he speaks of Sheker-Para, a favourable lady of Sultan Ibraham, or Sugar-Bit, ("Narr. of Trav. Eur., As., and Af.," v. i. p. 13. Lond. 1846). "At Damascus [at a shop], I asked for *sookhar*. It was sold in small loaves" (C. J. Addison, "Dam. and Palmyr.," ii. 190. Lond. 1838).

"Strong drink" is particularly unfortunate, as we are apt to associate *shekar* with our strong spirits, gin, whiskey, brandy, and rum, containing, some a little more, some a little less than 50 per cent. of alcohol. There is no warrant for the supposition that *shekar* ever approached this alcoholic strength. Fermentation, as Thudicum and Dupré and other

chemists have pointed out, and as I have myself proved, is arrested in the presence of 16 per cent. of alcohol; but I have never succeeded in reaching this spirituous strength by fermentation. Twelve per cent. is about as high as is generally attained.[1]

Occasionally amylic or other comparatively heavy alcohol is found in an intoxicating drink, as a result of imperfect distillation; but in England the presence of alcohol other than ethylic is so rare, and the quantity when present is so minute, that for practical purposes it is needful to pay regard only to the latter. All the alcohols are poisonous, and their action is similar.

EFFECT THE SAME.

"As to the effect produced by wine, there can be no difference between wine containing 10 per cent.

[1] "The limit of a natural wine is 16 per cent. of alcohol" (Thud. and Dupré, p. 682). "No natural sherry ever ranges above 12 per cent. of alcohol" (ibid. p. 649). "The alcohol rises to 13 per cent., by weight, which percentage approaches so nearly to the limit of strength of natural wines that a higher degree of strength is an indication that the wine has been fortified with spirits" (J. J. Griffin, F.C.S., "Chem. Test. of Wines and Spirits," p. 125. Lond. 1866).

alcohol, and wine of the same kind in which 7 per cent. alcohol exists, and to which 3 per cent. is added" (Mulder, "Chem. of Wine," p. 358. Lond. 1857).

ALCOHOL IN WINE SAME AS FREE DISTILLED ALCOHOL.

With distilled spirit in a mixture to contain it as distilled, free alcohol was compared with the original wine. "No difference could be detected between the two as regards (1) specific gravity, (2) boiling point, (3) vapour tension at high and low temperatures, (4) effects of freezing, (5) facility with which the alcohol could be separated, (6) endosmotic equivalent, (7) capillary attraction, (8) specific heat" (Thudicum and Dupré, "Or. Nat. and Use of Wine," p. 159. Lond. 1872).

ETHYLIC, OR ALCOHOL OF PURE FERMENTED WINE, THE ONLY PRACTICAL ALCOHOL.

"The various methods in use for the estimation of alcohol in wine have regard only to the ethylic alcohol. The proportion of the other homologous alcohols present is so minute, that any error com-

mitted by disregarding their presence is within the unavoidable errors otherwise incidental to the methods, and therefore unimportant" (ibid. p. 132). "We have not found a single physical or chemical property possessed by wine, which is not in perfect harmony with the assumption that it contains the alcohol as a simple admixture, and not in any sort of combination" (ibid. p. 159). "We have no evidence that the alcohol itself differs in the different forms of fermented beverage" (E. Lankester, M.D., F.R.S., on "Food," p. 214. Lond. 1861).

SHEKAR, A WEAK DRINK, NATURALLY FERMENTED, CONDEMNED IN THE BIBLE.

Distillation was not discovered until centuries after the appearance of the Old Testament. "The ancients knew nothing of the still" (Cyrus Redding, "Hist. Wines," introd. p. xiii., 2nd edit. Lond. 1836), so we are forced to the conclusion that intoxicating *shekar* was a "naturally fermented" wine, no stronger than our claret, and half the strength of port or sherry. Yet *shekar* was strongly and repeatedly spoken of with disapproval in the Bible, and was associated with woe (Isa. v. 11 ; v. 22) and sin (Isa. xxviii. 7).

FRUIT OF THE DATE PALM REMARKABLE FOR SWEETNESS.

Palgrave narrates that his party bought dates and heaped them on a shelf. "We hung it up from the roof beam of our apartment to preserve the luscious fruit from the ants, and it continued to drip molten sweetness into a sugary pool on the floor for three days together" (H. G. Palgrave, "Narr. Cent. and East. Arab.," i. 253, 3rd edit. Lond. 1866).

Theodoret, Chrysostom, Calmet, and others believe *shekar* to have been palm wine. "Palm Wine was also very common ; it is called *shekar* in the Scripture, and is frequently joined with grape-wine" (Calmet, "Ant.," p. 150, ed. Tindal. Lond. 1727).

עָסִיס—AHSIS.

Ahsis, rendered "wine" and "new wine," occurs five times. Most likely it represented the freshly expressed, and therefore unfermented juice of various fruits. In Joel iii. 18, it is said, "The mountains shall drop down new wine." In Cant. viii. 2, *ahsis* is applied to the juice of the pomegranate. In Isa. xlix. 26, "Drunken with their own blood as

with sweet wine," probably refers to must, *i.e.*, unfermented grape juice, with which they are spoken of as being satiated or cloyed (Vitringa, 1764; Prof. Douglas, 1868; Watson; Paxton).

סֹבֶא—SOVEH.

Soveh, under different forms, occurs three times, and may have been the representative of the *sapa vini* of the Romans, a sweet luscious boiled wine (*vin cuit* of France, and *vino cotto* of Italy). Culpepper, in his "Herbal," gives directions for the clarifying and boiling of the juices of fruits to the thickness of honey, which preparation, he says, is called *Roba* and *Sapa* (Ed. by Dr. Parkins, p. 353. Lond. 1814). Though, probably, in two texts it stood for unintoxicating wine (Isa. i. 22: Hos. iv. 18), I am inclined to think *soveh* referred to an intoxicant in Nah. i. 10.

OTHER WORDS.

There are collateral Scripture Hebrew words which possess a certain interest with reference to the drinks of the Bible, such as *Mesek* and allied forms, treated in the common version very happily as relating to mixed beverages; and *Shemarim*,

"dregs," "lees," "wine on the lees." But a study of these words does not seem to me to throw any light on the question, Fermented *v.* Unfermented Wine. There is little doubt that *Ashishah*, occurring four times, meant a cake of pressed or dried grapes or other fruit, such as Mr. Buckingham was treated to at Cæfr-Injey ("Trav. Arab.," p. 137. Lond. 1825), which cakes are common to-day in the East.

MODERN ASHISHAH.

At the convent of Sinai, Barrer enumerates, amongst the food of the simple living monks, "a kind of cake made of figs, almonds, and dates, which they compound themselves." "A cake of the same nature is a standard commodity in all Eastern bazaars" (Dawson Barrer, "Jour. Nap. to Jerusal.," p. 34. Lond. 1845).

Applecake in Montenegro.—"At Xmos, in a peasant's house, two plates of cakes made of apples, and really delicious. We have forgotten what they were called, but in Montenegro they take the place of shortbread and bun in Scotland" (G. M. McKenzie and A. P. Irby, ii. 274. Lond. 1877).

חֲמַר—KHAMAR.

Khamar, in Ezra vii. 22, associated with wheat, salt,

and oil; and *Khemer* (Isa. xxvii. 2), "a vineyard of red wine," appear to have been unfermented.

Khamrah, in Dan. v., appears to have been fermented. This word probably describes the foaming of the freshly expressed juice flowing from the wine press, or the foaming during fermentation. The former is alluded to by Macaulay in his "Lays of Ancient Rome"—

> "And in the vats of Luna,
> This year the must shall foam
> Round the white feet of laughing girls
> Whose sires have marched to Rome."

NEW TESTAMENT.

οἶνος—OINOS.

Oinos occurs thirty-two times. There is conclusive proof that this is a general term for "wine," including both the unfermented and the fermented. There can be no reasonable doubt that the proof of the former's inclusion is furnished by the parable of the bursting of old wine-skins by new wine.

Fermented wine could burst a wine-skin only if poured into the skin shortly after fermentation had commenced, and the skin had been closed up tight, the principle of the process employed in the manufacture of the sparkling alcoholic wines of the pre-

sent day. But as the manufacture of effervescing wine was invented by Dom Perignon only in the seventeenth century, this explanation, which on other grounds is untenable, is simply out of the question. The only possible solution remaining is that the unfermented wine, on being poured into old wine-skins, meets with organic *débris* from the previous contents, and by the enormous force evolved during fermentation bursts the skins. The wine, therefore, when poured into the skin, must have been unfermented. This unfermented intoxicating drink is called in the Gospels "new wine" (*neos oinos*). Elsewhere in this lecture I have adduced passages, both in sacred and profane writings, where *oinos* is used to denote unfermented .grape juice. No one will dispute that the *oinos* of the wrath of God (Rev. xiv. 10) signifies an intoxicating wine. Rev. vi. 6, "And see thou hurt not the oil and the wine," in all probability relates to the fruit, and not to the expressed juice of the olive and the vine.

γλεῦκος—GLEUKOS, AND σίκερα—SIKERA.

Gleukos, "sweet wine," and *sikera*, "strong drink," occur but once each. The remarks on *shekar* apply to the latter ; but of all the explanations of the remarkable occurrence narrated in Acts ii. 13–15,

none is satisfactory to my mind. *Gleukos* was usually indicative of sweet, unfermented grape juice, and it may be that the expression "are full of *gleukos*" was ironical, just as I have often myself heard the expression with reference to a passing drunkard, "There goes a teetotaler!"

CHAPTER XVII.

PASSAGES IN SCRIPTURE RELATING TO WINES.

LAW OF THE NAZARITE.

IT may not be inappropriate to note the law of the Nazarite with reference to liquors (Numb. vi. 3). "He shall separate himself from *yayin* and *shekar*, and shall drink no חֹמֶץ יַיִן וְחֹמֶץ שֵׁכָר, *khometz-yayin vĕ-khometz shekar*, neither shall he drink *kahl-mishrath anahvim*." This Nazaritish code is capable of two interpretations.

First, we may have three kinds of drink forbidden: (1) *Yayin* and *shekar*, which may mean the intoxicating wine of the vine and the palm, and by implication any intoxicating drink (products of vinous fermentation). (2) *Khometz-yayin vĕ-khometz shekar*, vinegar of the vine and palm (products of acetous fermentation). (3) *Kahl mishrath anahvim*,

any liquor of grapes (unfermented grape juice and unfermented liquor made from dried grapes, &c.).

Or second: (1) The prohibition may be general against *yayin* and *shekar*, *i.e.*, against all kinds of wine from the vine and palm. (2) The lawgiver, after the general prohibition of every kind of wine, may have gone on to specify the various kinds in order to emphasize the law, by particularizing both fermented and unfermented wine. (*a*) *Khometz-yayin vĕ-khometz shekar*, fermented *yayin* and fermented *shekar*. (*b*) *Kahl mishrath anahvim*, any liquor of grapes.

PHARAOH'S WINE.

Genesis xl. 11.—The Bishop of London, 1778, Matthew Henry, Adam Clarke, and many other well-known commentators, were very decided in the opinion that the liquor pressed by Pharaoh's butler and given the king to drink was the expressed juice of the grape without fermentation. That this is the plain meaning of the Scripture seems to me indubitable.

THE CORINTHIAN CHRISTIANS.

A word on 1 *Cor.* xi. 21.—*Μεθυω, methuo*, has at least two meanings—to be intoxicated, and to be

filled or plentifully fed (Ewing, "Lex." Glas. 1827). The latter surely is the more likely meaning of the remark rendered, "One is hungry and another is drunken." Drunkenness is not the antithesis of hunger. "One is hungry and another is quite full" would be more in accordance with common sense and sound reasoning, an interpretation which would account for the character of the apostolic injunction. It is to me incredible that if the Corinthian Christians had been guilty of the heinous sin of intoxication at the table of the Lord,[1] the apostle would have contented himself with exhorting them to wait for one another and to satisfy their hunger at home. This interpretation is held by Clement of Alexandria, the Archbishop of Armagh 1796,[2] Adam Clarke, Dr. David King in the "Imperial Bible Dictionary," 1868 ("one is famished and another is surfeited"), McKnight, and others.

[1] Intoxication on sacred occasions is not unknown in modern days. Witness the following: "The Indians [*i.e.*, of Bolivia] are, when sober, a hard-working race, and either bury their earnings, or spend them in religious feasts, which are always an excuse for a debauch" (Munster's "Notes on Bolivia," Journ. R. G. S., xlvii. p. 211, 1877).

[2] "And the poor man scarcely satisfies his hunger, while the rich indulges excess. The word *methuei* does not necessarily import drunkenness" ("Eng. Trans. Gr. Scrip.," note 21, on the passage in 1 Cor. xi. Dub. 1796).

TIMOTHY'S WINE AS A MEDICINE.

The character of the wine ordered by Paul to Timothy is to us a sealed book. I prescribe sometimes alcoholic and sometimes non-alcoholic wine in the treatment of disease, and both intoxicating and unintoxicating medicated wines have been in use in ancient and modern times.

MEDICINAL INTOXICATING WINE.

"In the vineyards of Mendé the husbandmen used to sprinkle the grape clusters with the juice of the wild cucumber, which communicated to the wine a medicinal quality" ("Athen.," i. 533; St. John, "Man. and Cust. Anc. Gr.," iii. 341. Lond. 1842).

"After withdrawing the pith introduce certain drugs into the hollow (Geopon, iv. 8), closing up the extremity with papyrus, and then setting the slip in the earth" (St. John, ii. 341).

Resinous wine good for the stomach ("Plut. Symp.," 5, 3).

MEDICINAL UNINTOXICATING WINES.

The Fruit Itself.

The grape cure on the continent is well known.

This fruit, while grateful to the palate, has valuable therapeutic properties. It is of great value from its aperient, diuretic, and alterative action (Thudicum and Dupré, "Grape Cure at Meran," p. 595).

The Dried Fruit.

"The dryed Raysens are very good against the cough and all diseases of the lunges, the kidneys, and the bladder" (Dodoens, "Herb.," p. 651. Lond. 1578).

Cornaro and New Wine.

Louis Cornaro found his strength renewed after drinking new wine at the beginning of every vintage.

New Wine Healthy.

When in Cochin a friend of his was ordered to drink Nyper wine new night and day, for his health. "He was ordered to take it before being distilled, when it is most delicate; for after distillation it becomes much stronger, and is apt to produce drunkenness" (Cæsar Frederich between 1563 and 1581, "Hakluyt," ii. pp. 339–375. Lond. 1810. Kerr's Coll. vii. 142).

Unfermented Wine for a Cough.

"It [*i.e.*, cute, sapa, or defrutum] helpeth the cough and shortnesse of breath, and to expectorate rough phlegm from the chest and lungs" (Parkinson, "Theat. Bot.," p. 1558. Lond. 1640).

This was simply a Medical Prescription for Timothy and for no one else.

Much Wine.

The directions given to deacons, "*mee oinō pollō prosechontas*" (1 Tim. iii. 8), and to aged women, "*mee oinō pollō dedoulōmenas*" (Titus ii. 3), fairly translated, "not given to much wine," have been taken by some to indicate fermented wine. There is no warrant for such an inference. A similar caution is given, Prov. xxv. 27, against "much honey" (*ahkol devash harboth lo tov*), which no one will contend is intoxicating.[1] The ancients were accustomed to drink sweet, luscious, unintoxicating wine to excess, and to take an emetic to get rid of the surfeit before attacking the next meal.

[1] "Not good to eat much honey, because excess of honey brings on sickness and vomiting, griping pain, and diarrhœa" ("Obs. Chardin," p. 161. Lond. 1764). Yet a poisonous honey was most disastrous to the Ten Thousand in their retreat.

INJUNCTION TO BISHOPS.

The injunction to bishops to be *mee paroinon* (1 Tim. iii. 3; Titus i. 7), literally, "not by or near wine," seems to involve abstention from drinking parties and avoidance of the drinking customs.

THE LAST SUPPER.

As to the wine used by our Lord at the Last Supper, the original, *γεννήματος τῆς ἀμπέλου, geneematos tees ampelou*, gives no countenance to the idea that the liquid was intoxicating. Unfermented grape juice can truly be called "the fruit of the vine," but after fermentation the nature of the liquid is completely changed. From an innocent, nourishing drink it is converted into a beverage with poisonous properties.

Listen to the weighty words of the Dean of Carlisle, 1861, "I have no doubt whatever that the cup our Lord blessed, when He instituted the Holy Supper, was a cup of unfermented wine. We might be glad if every table were served with unfermented wine."

WHEREIN IS EXCESS OR RIOT.

Eph. v. 18.—*Oinō, en hō*—"with wine, in which or

wherein (is excess or riot)." Wherein may apply either to the whole act of drunkenness, in which is excess or riot; or to *oinō*, in which wine there is (a tendency to) excess and riot. The latter seems to me the more likely meaning, as in all narcotics—alcohol, chloroform, and opium, for example—each dose begets a desire for another dose. This is a distinguishing characteristic of a neurotic or narcotic poison, which renders all such substances mockers and deceivers. Viewed in this light, the apostolic teaching is in strict accord with the conclusions of science and experience. It ought not to be forgotten that the tendency of intoxicating wine is to disturbance and riot. This common sense interpretation is aptly illustrated by the incident related in the following extract from Usher: "The Iman Jumah, the principal dignitary of the Moslem faith in Persia, was residing in Ispahan, and gave us an audience. His notice being attracted by a book which M. Agenor held in his hand, it was presented to him. Opening it at random, he stumbled upon the passage, 'Be not drunk with wine wherein is excess,' words of which he at once availed himself to point out that the Christians disobeyed their own Sacred Book in drinking the forbidden liquor" (J. Usher, F.R.G.S., "Journ. Lon. to Persepolis," p. 592. Lond. 1865).

חֵמָה—HHEMAH, POISON (HAB. ii. 15, 16).

Though not strictly within the scope of my inquiry, it is but just to state the contention of Dr. Lees, that *hhemah* ought to be rendered "poison," in this passage, instead of "bottle." His reasons are very strong, especially as the word is translated "poison" six times in the Old Testament: Deut. xxxii. 24, 33; Psa. lviii. 4, cxl. 3; Job vi. 4.

"TEMPERANCE BIBLE COMMENTARY."

Such is a brief glance at the most important and most difficult Scripture references to wine. I strongly recommend all biblical students to give a careful consideration to the vast array of evidence adduced in the "Temperance Bible Commentary," by Dr. F. R. Lees and Rev. Dawson Burns. Every text of Scripture bearing on drinks and drinking is commented on, and the various interpretations are candidly stated (5th edit., Partridge. Lond. 1880). The excellent contributions of Professors Moses Stuart, Douglas, and Eadie, Dr. Valpy French, Stubbin, Mearns, Ritchie, Scudamore, Bastow, Smith, and others, will amply repay perusal; but to Dr. Lees, beyond all others, is the Scripture Wine Question indebted for the wonderful advance

it has made. His industry, scholarship, and acuteness of reasoning merit the warmest thanks of every lover of truth and of the Bible.[1]

[1] "No writer with whom we are acquainted has devoted so much time and research to the subject as Dr. F. R. Lees, and we believe that his principal positions have not yet been successfully assailed" (Professor Douglas, "Imper. Bib. Dic.," art. Wine).

CHAPTER XVIII.

THE BIBLE AND INTOXICATING DRINK.

THE Bible records Divine commands to abstain: to Aaron and his sons when going into the Tabernacle, to the mother of Samson, and to John the Baptist. The Bible commends and sanctions abstinence, as in the case of the Rechabites.[1] The Bible teaches that abstinence is in accordance with health, as in the case of Daniel and his companions. The Bible contains warnings against drunkenness, against habitual drinking, and even against drinking at all (Prov. xxiii. 31). The Bible denounces the

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[1] West and South of Niffar, "adjoining the Afej district, are the territories of Beni Recháb (literally, 'sons of the stirrup,') whose independent chief, named the Amir or Prince, claims descent from the original possessors of the soil. The Beni Rechab are a remarkable race, and in them we may probably recognise the descendants of the Rechabites." "The observation of their ancient customs remain unchanged" (W. K. Loftus, F.G.S., "Chaldea and Susina," pp. 102, 103. Lond. 1857). Speaking of the immediate neigh-

dangerous and deceitful character of wine, and holds up to us for our warning, humiliating examples of truly godly men who tried to drink moderately, and failed.

SCIENCE AND EXPERIENCE SUPPORT THE TEACHING OF THE BIBLE.

Science and experience having demonstrated the perfect truthfulness of these teachings of the Bible on the dangerous and deceptive tendency inseparable from intoxicating wine, is it not in accordance with common sense to infer that the Sacred Volume cannot contradict its own doctrine? There is a difference between wine a poison, and wine a blessing. Wherein lies the distinction? The same wine cannot be both, unless it may be when administered medically like any other poison, a con-

bourhood of Wády Músa as being in the hands of fellahin, called The Lingathench, Professor Palmer says, "They are the sons of Leith, a branch of the Kheibari Jews, who reside near Mecca, and played so important a part in the early history of Islam. The Kheibari have, by Dr. Wolff and other learned travellers, been identified with the Rechabites mentioned in Jer. xxxv. 6, 7" (E. H. Palmer, M.A., "Desert of the Exodus," ii. 432. Lond. 1871). "This precept they have obeyed to the present day, for they drink no wine and dwell in tents" (ibid. ii. 433).

dition in which these opposing Biblical declarations have no application. Can this distinction be merely in the quantity of the article, or is it not rather in the quality? There is a specific difference between intoxicants and non-intoxicants. Fermented wine is a mocker—unfermented wine is not; intoxicating wine is poisonous—unintoxicating wine is not.

"FERMENTED" AND "INTOXICATING" NOT SYNONYMOUS.

It is right to state here that the words "fermented" and "intoxicating," though generally considered to be synonymous, are not absolutely so. Bread may be either fermented or unfermented, but neither is intoxicating. Ginger beer made by the old process is fermented, and contains a minute quantity of alcohol, but no one will contend that it is intoxicating. You may have a fermented wine with a proportion of alcohol incapable of inducing intoxication. Such, probably, was the *Posca* given to the Roman soldiery, the *Lora* for slaves, and the *Piquette* of France.

Pesca.—"The vinegar was not like our vinegar, but a small wine called *pesca* or *sera*" (Col., "De Re. Rust.," i. and xii. 40). "They make great use of it in

Spain and Italy in harvest time. They use it also in Holland and on shipboard to correct the taste of water" (Calmet, "Dic.," 4th edit., art. Vinegar. Lond. 1823).

Lora for Slaves.—"For their drink they had a small, thin wine called *lora* (Varro, "Re. Rust.," i. 54; Col. xii. 40; Cato 25) by the Romans, made of the husks of grapes, laid, after they had been pressed, to soak in water (Diosc. v. 13), and then squeezed again like our bunnel in the perry county" (St. John, "Man. and Cust. of Anc. Gr.," iii. 28. Lond. 1842). "A drink precisely similar, and manufactured in the same manner, is known in the wine districts of France under the name of *piquette*, and commonly also it is there appropriated to the use of domestics" (ibid.—note).

Piquette.—"In the Champagne, after brandy is distilled from the marc by distillers who have bought the marc for that purpose, sometimes a third wine is made out of them. They are put into the cuves; water is poured upon them, and allowed to stand over them from eight to fourteen days; and ultimately a dilute light red liquid is obtained, which the people call *piquette.* Of such *piquette* the whole population drink *ad libitum*" (Thudicum and Dupré, "Or. Nat. and Use of Wine," p. 460).

UNFERMENTED AND FERMENTED WINES BOTH USED.

Unfermented grape juice, call it what you will, exists in many Eastern countries. It is in common use at the present time, and was extensively used in ancient times. In many ancient Eastern works it was called "wine."[1] Fermented grape juice, call it what you will, exists. It is drunk, to a limited extent, in Eastern countries now. Though its common use among the ancients is denied by many Oriental scholars (*vide* Calmet,[2] Archbishop of Canterbury[3]

[1] So strong is the evidence brought forward by those who believe in the ancient and modern use of unfermented wine, and in the generic word "wine," including both the unfermented and fermented varieties, that the Rev. Canon Hopkins, one of the most judicious theologians of the Church of England, has recently adopted this view ("Holy Scripture Temp. and Total Abstinence." Wells Gardner, Lond). A similar assent is given in one of the most recent and useful Greek and Hebrew Concordances of the Bible ("Analytical Concordance," by Robert Young, LL.D. G. A. Young and Co., Edin.).

[2] Calmet.—The use of wine was not common, as it is not at this day in the East (Calmet, "Ant.," p. 150, ed. Tindal. 1727).

"Several of the ancients were of opinion that wine was not in use before the Deluge" (ibid., art. Wine).

[3] Archbishop Potter.—"In the primitive times water was the general drink" ("Arch. Græc.," ii. 362, 7th edit. Lond. 1751). "In the primitive times men desired no sort of drink

1737, Watson, &c.), I am of opinion that it was used. In many ancient Eastern works it was called "wine." Thus there were two essentially different kinds of wine known to and used by the ancients.

I desire to carry the argument no further. I am satisfied with having proved that both fermented and unfermented wines have always existed.

TWO MODES OF INTERPRETATION.

There are two modes of interpreting Scripture references to wine. By the one mode our Divine Master made, and the Bible sanctioned, the social use of wine containing poison in an intoxicating proportion.

By the other mode, the wine the Bible condemns is the wine with poisoning properties; while the wine, the moderate use of which the Bible approves, and which our Saviour made, was not poisonous but wholesome.

NO EXCUSE FOR DOGMATISM.

Dogmatism on either side is inadmissible. It is

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besides that which the fountains and rivers afford" (ibid. ii. 357).

Lambert Bos.—"Water was the only beverage of the Greeks in the early times" ("Ant. Gr.," p. 377. Lond. 1772). Afterward they mixed their water with wine (ibid.).

for the devout student of God's Word to decide which mode of interpretation seems to him the one more consistent with the spirit breathed throughout the teaching of the Sacred Records, and the more consonant with the general tenour of the life and character of Christ.

PART II.

WINE: ECCLESIASTICAL.

CHAPTER XIX.

INTOXICATING WINE UNSAFE FOR REFORMED DRUNKARDS.

INTEMPERANCE A PHYSICAL AS WELL AS MORAL EVIL.

WE now leave the region of exegetical and philological speculation, and emerge from the open battle-field of doubtful disputation on the solid ground of ascertained truth. Here I am on my own territory of medicine. The footing is firm. My back is to the rock of truth, and—

> "Come one, come all! This rock shall fly
> From its firm base as soon as I."

Over and above the moral and spiritual aspect of

intemperance, there is the physical aspect. Beside drunkenness the sin, there is drunkenness the disease. The soul of the inebriate may be regenerate, his spirit may be born again, and the moral disease cured by the unerring skill of the Great Physician, but not unseldom,

> "The senses still are in the bonds, although
> Bleeding, the soul hath freed itself."

The physical footprints of alcohol on the body and brain of man can be effaced by no moral or religious agency. Perverted nutrition and altered structure can no more thus be restored to their normal condition, than can conversion replace a tooth which has been knocked out, or an arm which has been cut off. With reference to the narcotic which "biteth like a serpent, and stingeth like an adder," it may truly be said of the tissues of the dipsomaniac that "the trail of the serpent is over them all."

RELAPSE OF REFORMED DRUNKARDS THROUGH INTOXICATING COMMUNION WINE.

Some of the rescued from the bondage of strong drink have little or no craving after the first few days. With more, the craving either gradually

subsides or is overcome by moral and religious influences. But with many the craving is ever latent, and the old unhallowed fire ready to be rekindled by the smallest sip of the weakest form of an intoxicating liquor. The sore of intemperance but too often leaves a scar, which needs but a slight application of the old stimulant to break out afresh in all its pristine virulence. Not a few victims saved through abstinence from this vice, and crime and sin have, after manfully resisting the temptations of the world for years, been tempted again to ruin by partaking of alcoholic wine at the Holy Communion, in which they had with difficulty been persuaded to join by an unenlightened, though zealous, Christian minister. Of the victims who have met so sad a fate, we may indeed say, in the words of the poet, that they were—

> "Hearts that the world in vain had tried,
> And sorrow but more closely tied;
> That stood the storm when waves were rough,
> Then in a sunny hour fell off,
> Like ships that have gone down at sea,
> When heaven was all tranquility."

A Christian worker A., not believing in the danger of alcoholic wine at the sacrament to those who have ever fallen under the power of drink,

often remonstrated with a fellow Christian worker B. on the latter's persistent absence from the Communion. A. knew the reason, which was that B. had once been a slave to drinking, and, though rescued from its thraldom and power, dreaded exposure to the old temptation by partaking of ever so small a quantity of intoxicating liquor. B. had been appointed, by those who knew him well, and had perfect confidence in his sobriety and conversion, to the responsible post of Scripture reader to St. ——'s Church. B. was closely allied with A. in all Church-fellowship except the Communion. A. repeatedly urged B. "to trust to the grace of God," reproaching the latter with want of faith in God's power to uphold him. A. further urged strongly the inconsistency of B. absenting himself from an ordinance, at which, in his public position, he ought rather to advocate attendance. At length A. invited B. to spend a Sunday at the former's house, suggesting that if they together received the sacrament and returned home there could be no danger. So the matter was settled. Immediately after Communion A., being called, crossed the church, was engaged only for a minute, and returned to the pew to find his friend B. gone! A. searched up and down for a long time with dreadful misgiving, and, late at night, found B. mad with

drink in a gin-shop near the church. Will it surprise you to hear A.'s solemn declaration, "Never again will I ask any one to take fermented wine even at the Communion!" This is but a type of many such cases. Owing to the fear of the facts becoming known, it is difficult to obtain permission from the friends to mention names; but in this case I am at liberty to disclose my authority to the Archbishop of Canterbury as a guarantee of the facts.

ALCOHOL MUST BE AVOIDED BY REFORMED DRUNKARDS.

As we ponder over such harrowing tragedies, can we wonder that a distinguished member of the non-abstaining section of the Church Temperance Society, a magistrate and a medical practitioner of note—Dr. Alfred Carpenter, President of Council of the British Medical Association—recently declared, at a medical discussion on Dipsomania, that for habitual drunkards alcohol was "the very devil," and ought to be religiously shunned by all such? ("Med. Temp. Journ.," No. xlviii., July, 1881). Though this is language I would not myself care to use, I am bound to confess that there is more truth than poetry in the description. Alcohol is a veritable physical demon which, once introduced

into the blood of many a reformed inebriate, even after the lapse of a long term of strict sobriety, may rage through his veins like a consuming fire, and hurry him into the lowest depths of his long abandoned and sincerely repented of sin.

Not for a moment would I seek to blame the clergy for the sacramental use of a narcotic poison, fraught with peril both to the bodily and Christian life of the reformed drunkard. We all have been culpable, and, most of all, we of the medical profession, who, as men of learning and science, ought to have taught long ago that which we, as a profession, are only beginning to teach now, the poisonous narcotic nature and influence of alcohol. It is difficult for any one, inexperienced in the treatment of dipsomania, to realize the truth. But so real is the danger that, Churchman as I am, even when a drinker myself, I never allowed any reformed drunkard to go near a Communion-table where an intoxicating liquid was presented. In this practice I am supported by Dr. Richardson, Dr. Fergus, Surgeon-General Francis, and other experts in the higher ranks of the medical profession. I would as soon have thought of putting a loaded pistol in the hands of a maniac in a lucid interval, bidding him take care not to shoot himself.

TESTIMONY OF ARCHDEACON JEFFREYS.

Well might the pious and venerable Archdeacon Jeffreys testify: "Many years' experience of the cases of reformed drunkards has convinced me that the danger is real; and I feel a miserable misgiving of heart every time I administer the sacrament to one of those unhappy beings in an intoxicating drink."

DR. RICHARDSON, F.R.S.

"As to the practical point whether there is a danger in this matter of using wine at the Sacrament—*Yes! I say there is.* I say the danger is very great indeed in regard to a considerable number of people. The clergy have made to them certain statements by those who consult them, and we have too. The physician's room is, in fact, a confessional. Very often statements are made to us physicians which are made to none other. In respect of this very question, hardly a month passes but what some one speaks to me on this very point which Dr. Kerr has brought forward. I could at this moment, if it were right to do so, name at least ten persons who wished to accept the communion, and who do not go to it from the fear lest they should fall back into those ways from

which they have been rescued by the influence of friends or physicians or from other causes. Well, this is a very important point indeed to bear in mind. I don't know whether I have ever known a person myself go back from that cause. I invariably tell them not to run the risk, and therefore I have not had the opportunity of seeing, and never will have. If a person comes and asks me for his body's health to tell him what is right and I see a risk even in his accepting that part of the service of the Church, I tell him not to take that risk, and I always shall. It remains, therefore, for the very careful consideration of all who are interested in this question whether they cannot meet those who are working, as we are, by the general introduction of this particular form of unfermented and harmless wine into the service."—*Address at Lecture to Church Homiletical Society, Nov.* 1, 1881.

DR. ANDREW FERGUS, MEMBER GENERAL MEDICAL COUNCIL, EX-PRESIDENT FACULTY OF PHYSICIANS AND SURGEONS.

"In the case of a dipsomaniac who followed my prescription of total and complete abstinence for life, I was asked by the patient's wife if it would be safe to allow him to communicate. I said, 'No,' and advised her to leave town for a few days so

as to be from home at the time. So far as I can remember, this is the only case in which I have *ordered* a person to abstain from the communion for fear of the small quantity of wine then taken raising the craving. I have had many other cases, in which, if I had been asked the question, my advice would have been to stay away."—*Letter to Author*, 13th Oct., 1881.

SURGEON-GENERAL C. R. FRANCIS, M.B., F.R.C.S., LATE PRINCIPAL CALCUTTA MEDICAL COLLEGE.

"I think it my duty to bear testimony to the truth of what Dr. Norman Kerr has said with reference to the danger drunkards meet when they are called upon to drink fermented wine at the Lord's Table. Recently there has come under my observation a case in point, where a lady somewhat fond of wine, though not a drunkard, took to drinking, on my recommendation, Wright's unfermented wine. Lately she went to a place of worship where fermented wine was drunk, and came back to tell me the following day that she felt all the old feeling coming back. In fact it renews the appetite, and it is a very dangerous precipice altogether upon which the communicants are called to tread."—*Address at Lecture to Homiletical Society, Nov.* 1, 1881.

THE HEREDITY OF ALCOHOL.

There is a yet stronger reason for the substitution of innocent unintoxicating wine at the Lord's Table in the place of the poisonous intoxicating wine we, in modern times, have been accustomed to use. The saddest phase of the whole mournful subject of intemperance is the operation of the dread law of heredity in alcohol. This is no baseless theory, no "bodiless creation" begotten of the exuberance of an abstinent phantasy. It is no phantom of a nephalian brain, but a stern, sad reality. As a celebrated non-abstainer, Dr. A. Clark, recently remarked: "The sins of the fathers in this respect are visited upon the children unto the third and fourth generation."

Again, Dr. Clark says that so soon as a man begins to take one drop more than the physiological quantity, the desire of alcohol is not only begotten in him, but becomes a part of his very nature—that nature so formed by his acts being calculated to inflict "curses inexpressible" upon the earth, when handed down to the generations that are to follow after him as "part and parcel of their being."

This is an opinion shared by Aristotle, Plutarch, Lanceraux, Rousel, Richardson,[1] Lunier, in fact, by

[1] Re-affirmed by Dr. Richardson on Nov. 1, 1881.

all who have made heredity a subject of special study. As clear to me as are the evidences of the hereditary transmission of feature and of such diseases as gout and cancer, are the evidences of the hereditary transmission, not only of the diseased conditions induced by drink, but of the drink crave itself. This latter is, so to speak,

> "A mingled madness in the blood,"

a taint inherent in the very nature, a pent-up stream which, at the lightest stimulus of alcohol, is but too apt to

> "Burst its confinement with impetuous sway,
> O'erswell all bounds and bear even life away."

Not a week passes in which unmistakable proofs of the vitality of this immutable natural law do not tear my very heart strings. In one distressing case of confirmed inebriety, which had continued for two years, a pleasant and talented girl of the tender age of fifteen owed her inherited disease to both father and mother. In another case, that of a genial and accomplished scholar, the inclination descended from both parents. In yet another instance, in the practice of a medical friend, the grandfather had so indelibly stamped upon his descendants this subtle proclivity, that on the first occasion on which his grandson, then two

years old, was offered intoxicating wine, the little fellow became intoxicated. On a review of 252 cases of habitual inebriety, this was found to be a family failing with no less than 116.

That certain individuals are predisposed to excess in alcohol, no medical practitioner and no Christian minister should ever forget. Such can abstain and can drink to excess, but drink moderately they cannot. To me there is no nobler sight on earth than men and women, sometimes of towering intellect and lofty aspirations, struggling all their life through against their concealed and hereditary foe. All honour be to them for their unremitting and gallant efforts to keep their unrelenting enemy at bay; but not till life's fitful fever is over dare they relax their vigilance; for so long as the warm blood courses through their veins does the hidden fire smoulder in their bosom, and they are ever

"As a good man with dark strivings torn."

SUBJECTS OF ALCOHOLIC HEREDITY MUST UNCONDITIONALLY ABSTAIN.

For all such, the only safety is in absolute and unconditional abstinence. The intoxicating principle, found in the oldest and most delicate fer-

mented wines as in the strongest and most fiery ardent spirits, must be scrupulously avoided. In every intoxicating draught lurks their implacable foe.

WE ARE BECOMING LESS TOLERANT OF ALCOHOL.

What lends a yet more serious aspect to these considerations is that, like the Americans, we live physically and mentally at so fast a pace that every year we are becoming more and more intolerant of alcohol. Thus every succeeding generation is less and less able to resist the witchery of its charms and the potency of its action.

AUTHOR COMMUNICATES IN INTOXICATING WINE, BUT MUST SPEAK TRUTH.

Let there be no misapprehension. Individually, I care little about the Communion Wine Question. The liquid is nothing to me, for I look upon the Sacrament as a spiritual act. I never have communicated in unfermented wine. I have always communicated, and probably may always do so, in fermented wine. Nor has the question any interest for me on its merits. I care nothing about what you do with the strong who are free

from any inherited taint of alcohol. But my work as a physician with inebriate patients is marred, my labour as a Christian among the intemperate is to some extent undone, by the present very general use of intoxicating wine at the Communion. The case of the reformed drunkard is so pressing, the plight of the inheritor of the hereditary drink crave is so piteous, that

> "I dare no longer stand in silence—dare
> No longer see thy wandering on in darkness,
> Nor pluck the bandage from thine eyes."

INTOXICATING COMMUNION WINE REPELS SOME CHRISTIANS.

At present, what is the fact? Many of the reformed, who regularly worship at an Established Church, are compelled in sheer self-defence either to deprive themselves altogether of the privilege of communion, or to resort for that purpose (as in some cases they do to my personal knowledge) to some Nonconformist chapel where unintoxicating wine is used.

APPEAL ON BEHALF OF THE REFORMED DRUNKARD.

It is for the poor, the helpless, and the weak

that I plead—not for mercy, but for justice; not for pity, but for the righting of a wrong. The repentant dipsomaniac and the yet unfallen hereditary legatee of alcohol are, as a physician, my peculiar care; and to whatever there is of honour, of equity, and of righteousness in the visible Church of Christ, do I with confidence appeal to make her most sacred services safe for these weak brethren by the celebration of the Lord's Supper with healthful, innocent, unintoxicating wine.

CHAPTER XX.

COMMUNION IN UNFERMENTED WINE AT ALL PERIODS OF CHURCH HISTORY.

THERE need be no difficulty. We have evidence of the use of unfermented wine in the very infancy of the Christian Church.

A.D. 200.

The Apocryphal Acts of the Apostles (2nd cent.) incidentally testify to this practice. In the "Acts and Martyrdom of Matthew" these words are narrated as having been addressed to Bishop Plato: "*και προσενέγκατε προσφορὰν ἄρτον ἅγιον, καὶ ἀπὸ τῆς ἀμπέλου τρεῖς βότρυας ἀποθλίψαντες ἐν ποτηρίῳ συγκοινωνήσατέ μοι*"—"And approach with an offering of holy bread, and having pressed out three clusters from the vine into a cup, communicate with me" (Tischendorf, "Acta Apostol. Apocr.," p. 184. Leipsiæ, 1851. "Acta et Martyrium Matthaei").

A.D. 337.

Gratian (Pars. iii., "De Consec." Distinc. ii.) ascribes a Decree to Pope Julius I., A.D. 337, in which these words occur: "Si necesse sit, botrus in calice comprimatur et aqua misceatur"—"If necessary, let the cluster be pressed in the cup and mingled with water." (Given also in Labbé, "Sacr. Concil.," ii. 1267. Flo. 1757.) This decree is deemed as of authority by Durandus (13th cent.), who says: "Botrus ante vuæ in necessitate comprimi et inde cōfici potest; sed de ipso botro non compresso, non potest communicari" ("Rat. Div. Off.," lib. iv. cap. xli. n. 10. Lugd. 1565)—"In case of necessity, the grape cluster is to be pressed and then communion can be celebrated; but with the unpressed cluster, communion cannot be had."

7TH CENTURY.

At the Fourth Council of Braga (on the Cavado river in Portugal) held A.D. 675, reference was made to some who used no other wine but what they pressed out of the cluster at the Lord's Table, and to others who communicated with the unpressed cluster. The Council condemned the use of uncrushed grapes with water, thus allowing by implication the use of expressed grape juice and water

(Dupin, "Eccl. Hist.," p. 20, 3rd edit., Dub. 1724; Labbé, vol. ii. cap. ii. col. 155, 156; Bingham, "Ant. of the Christ. Ch.," v. 410).

9TH CENTURY.

In Egypt, when without fermented wine from the vigilance of the Emir Abdel Messias, who had prohibited the buying and selling of fermented wine in that country, the Christians in the ninth century steeped raisins in water and expressed the juice (Renaudot, "Hist. Pat. Alex.," vol. i. p. 193. Lit. Orient. Coll. Paris 1716). "Hoc vino utuntur"—"They use this wine," says the historian (see also Neale, "Hist. of the East. Ch.," ii. 156. Lond. 1847).

Dionysius Barsilibi testifies to the use of the juice of dried or fresh grapes when the other wine could not be had. He adds: "In necessitate, sumatur uvarum succus, aut ex uvis passis liquor expressus: . . . cum isto Liturgia celebrari potest" —"In necessity let the juice of grapes be taken, or the liquor expressed from dried grapes: . . . with this the Sacrament can be celebrated" (Renaudot, Lit. Orient. Collect., i. 193. Paris, 1716).

12TH CENTURY.

Johannes Belethus approvingly records the practice of communion in juice expressed from

ripe grapes, on the Day of Transfiguration, in the absence of new wine: "Notemus quidem Christi sanguinem eadem hac die confici ex novo vino, si inveniri potest aut aliquantulum ex matura uva in calicem expressa" ("Rat. Div. Off.," cap. cxliv.; Abbé Migne, "Pat. C. C.," v. 202)—"Let us note that some on this same day set forth the blood of Christ from new wine, if it can be found, or from ripe grapes expressed into the cup."

Durandus speaks of the sacramental use of such unfermented wine on the 6th of August, in similar circumstances, as a well-known custom of the time: "Nota in quibusdam locis" ("Rat. Div. Off.," lib. vii., cap. xxii. Lugd. 1565)—"Well known in certain places."

13TH CENTURY.

Thomas Aquinas also recognised this 7th Decree of Julius, while bearing the following emphatic testimony to the lawfulness and validity of unfermented wine at the sacrament: "Mustum autem jam habet speciem vini: . . . ideo de musto potest confici hoc sacramentum" (Pars. iii. Quæst. lxxiv. art. v.)—"Must [*i.e.*, unfermented grape juice] has the species [*i.e.*, specific nature] of wine: . . . therefore this sacrament may be celebrated with must."

The Angelican Doctor warns against "Mustum statim expressum de uvā in calice," "propter impuritatem musti"—"Must expressed immediately from the grape in the cup on account of the turbidity of the must;" but adds that, in necessity, by the Julian Decree, "botrus in calice comprimatur," "the cluster may be pressed in the cup."

16TH CENTURY. CHRISTIANS OF ST. THOMAS.

Duarté Barbosa, in the beginning of the sixteenth century, says, that because there is no [fermented] wine in India the Christians of St. Thomas, whose work at Malabar was so celebrated, steep raisins for a night in water. The next day they squeeze the fruit, and with the juice celebrate the Sacrament (Stanley in Hakluyt, "Des. of E. Afr. and Malab.," p. 163. Lond. 1866).

Bishop Osorius testifies concerning these followers of Christ: "Vino ex passis uvis confecto in sacrificiis utuntur" ("De Reb.," p. 143. Olysipp. 1571) —"They use wine made from dried grapes." This practice of the Christians of St. Thomas is confirmed by Brerewood("Div. of Lang.," p. 147. Lond. 1614); Alex. Ross ("Pansebeia," xiv. p. 508. Lond. 1653); Philip Baldaeus, 1672 ("Desc. of E. Ind. Co. of Malab." in Churchill's Voy., v. iii. p. 574. Lond,

1732) ; and in Nelson's "Fasts and Festivals," ch. iv. p. 48, on St. Thomas.

17TH CENTURY. CHRISTIANS OF ST. JOHN.

In the seventeenth century Thevenot writes that the Sabæans or Christians of St. John used wine from dried grapes steeped in water, which they pressed and moistened the flour with ("Travels," pars. ii. p. 164. Lond. 1687). This was the testimony of Baron Tavernier in 1678 ("Pers. Trav.," lib. ii. c. 8. Lond. 1678).

THE BISHOP OF JERUSALEM ON ABYSSINIAN COMMUNION.

The Bishop of Jerusalem (Gobat), in his "Journal of a Sojourn in Abyssinia, in 1834," speaking of the communion wine says, "The wine is the juice of dried grapes with water" (p. 345. Lond. 1834); and again, "Wine which is raisin juice and water" (ibid. p. 223).

This practice of the Abyssinian Church is conceded by Archdeacon Tattam, and seems to have ever been the common custom in that body of Christians (Renaudot, "Alvarez. Ethiop.," i. 193).

NESTORIAN CHURCH.

Ainsworth, narrating his travels among the Nestoreans in 1840, records that "raisin water supplied the place of wine," the bishop administering the sacrament ("Visit to Chaldeans," Jour. R. G. S., xi. p. 37, 1841. "Trav.," ii. 210. Lond. 1842.).

LYBIAN MONASTERIES.

Tischendorf, in his narration of a visit to the monasteries of the Lybian Desert in 1846, writes, "Instead of wine they used a thick juice of the grape, which I at first mistook for oil" ("Trav. in the East," p. 50, ed. by Shuckard. Lond. 1847).

THE REFORMERS.

"Cui symbolo licet substitui possit aliud vini loco usurpari solitum ad potum, ubi illud prorsus deest vel in plané Abstemiis, si qui tales, ob generalem analogiam et Sacramenti scopum (Johannes Marck, "Compend. Theol. Christ.," p. 608. Amst. 1722)—"For which symbol it is lawful for another to be substituted and used in place of wine for the ordinary drink, where that is entirely wanting, or

for the completely abstemious, if any such, on account of the general analogy and design of the Sacrament."

THE JEWS.

Some of the Jews have always scrupulously prohibited fermented drink as well as fermented bread at the Passover ("Encyc. Brit.," art. Passover; *Echo*, 17th April, 1878; The Dean of Capetown, 1878). Some use unfermented, others fermented, but not intoxicating, raisin wine.

THE SYRIAN CHURCH.

"The Clerical Journal" of 28th Feb., 1860, states that the Christians of the Syrian Church used "the juice of the expressed grapes diluted with water."

THE ABBÉ MIGNE.

The Abbé Migne says: "Le vin non-fermenté q'on appelle moût, *mustum*, est matière suffisante, selon le même auteur" [Durandus]; whom Migne acknowledges as an authority. "Wine, not fermented, which is called must, is competent material according to the same author" ("Encyc. Theol.," viii. 1233. Paris, 1844).

SUMMARY OF EVIDENCE OF ECCLESIASTICAL HISTORY.

The sum and substance of the evidence of ecclesiastical history is, as Scudamore well puts it ("Notit. Euch." Lond. 1876), "In the case of necessity, the expressed juice has always been held to be WINE FOR THE PURPOSE OF THE SACRAMENT."

COMMUNION IN UNFERMENTED WINE AT THE PRESENT DAY.

METHODIST EPISCOPAL.

In America, several large religious bodies have discarded fermented wine, while others have declared in favour of the unfermented.

At the General Conference (1880) of the Methodist Episcopal organisation, with more than 11,000 ministers, about one and three-quarter million members, and between four and five million adherents, the following alteration was made in their Book of Discipline: "Let none but the pure unfermented juice of the grape be used in administering the Lord's Supper."

SCOTTISH FREE AND UNITED PRESBYTERIAN CHURCHES.

In the Free and United Presbyterian bodies in Scotland, two of the three leading religious denominations in that country, and among the English Presbyterians, an increasing number of sessions every year exercise their constitutional right to use unfermented wine at the Lord's Supper. At least six United Presbyterian congregations in Glasgow, including some of the largest in the city, are in this category. This is also true of Congregationalists, Baptists, &c.

THE ESTABLISHED CHURCH OF SCOTLAND.

There are but two established churches left to us now—the one the Established Church of Scotland, the other the Established Church of England. By the decision on the Townhill case, the Supreme Court of the former in 1879 recognized unfermented wine as a lawful element of communion.

THE ESTABLISHED CHURCH OF ENGLAND.

In the Church of England itself, comparatively

few congregations adopt genuine fermented wine. Some have a mixture of port (often guiltless of the grape) with brandy or other distilled spirit, all commercial port in this country being fortified.

TENT NOT A FERMENTED WINE.

Many have Tent, which is *not* a fermented wine. At its worst, Tent is a mixture of treacle, spirits of wine, port wine dregs, and water; and at its best, of *unfermented* grape juice boiled, with 10 to 20 per cent. of proof spirit, or an equivalent quantity of brandy or whiskey, added to it to *prevent* fermentation.

(An analysis of samples of both common and the best Tent was here exhibited.)

UNFERMENTED WINE IN ESTABLISHED CHURCHES IN ENGLAND.

Other episcopal congregations, I am happy to say, use the genuine unfermented wine prepared by Mr. Frank Wright, Kensington, London. I have repeatedly minutely inspected Mr. Wright's process of the manufacture of this wine, and can vouch for it being *γεννήμα τῆς ἀμπέλου*, "fruit of the vine."

The grapes are imported from the continent. These are cleansed and crushed, and the juice is expressed and bottled in an incredibly short period. Fermentation is prevented by heat, a method practised, not only in the Holy Land, but in most Eastern countries, as far back as the earliest times of which we have an authentic record of the wines in common use.

In the Church of England, as in nearly all religious denominations in the United Kingdom, in many parishes, while the parent church communicates in fermented wine, the incumbents use unfermented wine at their mission stations.

UNFERMENTED WINE AT THE MILDMAY CONFERENCE.

At the well-known Mildmay Conference, founded by a saintly clergyman, where about 2,300 Christians, a considerable proportion of whom are clerical and influential lay members of the Established Church of England, communicate every year, for the last four years the wine used has been unfermented and unintoxicating.

OPINION OF DR. A. J. STEPHENS, Q.C.

As to the legality of the sacramental use of

unfermented wine, the opinion of the well-known ecclesiastical lawyer, Dr. A. J. Stephens, Q.C., seems conclusive. Dr. Stephens says: "There is no evidence to show whether the 'fruit of the vine' our Saviour administered at the Last Supper was 'unfermented' or 'fermented;' in ancient times both freshly expressed and preserved unfermented grape juice was drank; such wine would not intoxicate; in early times communion might be had by pressing vine clusters into the cup; there are authorities for calling unfermented grape juice 'wine;' both fermented and unfermented liquors were in use in ancient times; 'mustum' meant 'unfermented;' and, as a matter of principle, it is indifferent whether fermented or unfermented wine is used, no question of doctrine being involved."

POSITION OF THE EPISCOPAL BENCH.

One or two of our most devoted prelates have, somewhat hastily, and evidently with an utter unacquaintance with the facts, pronounced against unfermented wine at the Eucharist; but if they follow my example, by studying the evidence now before the Church for twelve months before they again lift up their voice in public, they will be the

first to acknowledge their hastiness. Two bishops, and there are no better scholars in our communion, have authorized the use of unfermented wine at the Lord's Table; and I know of other members of the episcopal bench who have communicated in this wine, and have made no sign.

CHAPTER XXI.

APPEAL TO THE BISHOPS AND CLERGY.

To me, a physician concerned for the safety of my patients reformed from drunkenness, as for the safety of my unfallen patients burdened with the inherited taint of alcohol, it is a matter of perfect indifference what any ecclesiastical authority may decree. As an expert, my business is to declare the truth and bear witness to the facts. It is for the bishops and clergy of our venerable Church to see to the propriety and consistency of her services. But perhaps I may be permitted, as the humblest of her sons, and an insignificant unit in the great community of Christians, to suggest the inquiry whether any custom can be wholly in accordance with the teaching and character of Christ which, in these days of widespread and hereditary alcoholism, is unsafe for the weakest of those for whom He died.

It ought not to be forgotten that there are large numbers of Band of Hope children who have been truthfully taught that alcohol is a poison. When on joining the Church they are offered intoxicating drink at their first communion, will not their moral sense be shocked? Will they not naturally reason, "Surely what I have been taught about alcohol being a poison and intoxicating drink poisonous must have been utterly untrue. If intoxicating wine is an appropriate emblem of Christ's blood it cannot be poisonous, it cannot be injurious to the body, and it cannot have a tendency to narcotise or paralyse the mind"?

The force of such reasoning on the presence of intoxicating wine in high places in our Churches is well illustrated in the following extract from an old book of travel:

"Bayázid Ilderhim, having built the great mosque at Brússa, and having asked Emir Sultan, the celebrated saint, whether it was not a perfect mosque, the saint answered, 'Yes; it is a very elegant mosque, but some cups of wine for the refreshment of the pious are wanting in the middle.' The Sultan replied with surprise, 'How would it be possible to stain God's house with the liquor forbidden by the prophet?' 'Well,' said the saint, 'thou hast built a mosque, Bayázid, and find it

strange to put cups of wine therein ; and thou, whose body is God's house, how is it thou art not afraid of staining the purity of this God-like house with wine day and night ?' From that moment, Bayázid, repenting, left off drinking wine" (Evliya Effendi, "Travels," ii. 25).

That such difficulties have perplexed the spirit of earnest and truly Christian abstainers I have reason to know. These difficulties cannot be evaded without dishonour and discredit to the Church. They must be met, or our communion will lose the services of devoted men and women whom, in these days of sin and unbelief, we can ill afford to alienate.

Such are the facts and the thoughts which I have the privilege of laying before you. To the clergy of the Church of England I, in common with every member of the profession to which I belong, am deeply indebted for unselfish and generous co-operation in our common mission of mercy to the sick, the suffering, and the dying. No language can convey my sense of the value of your noble work, and it is to me an inexpressible happiness to be afforded the opportunity of testifying my gratitude by this feeble contribution to the solution of two most delicate, important, and urgent problems. I have endeavoured to sift the evidence on the various

points, and by personal experiment and research to arrive at the truth. Whether you agree or disagree with the conclusions to which I have been compelled by the evidence to come, is to me of no moment. Every one who has thoroughly studied these questions is entitled to have and to hold his own opinion. Only let the opinion be intelligent. My topics to-day must be treated as open questions. Let us all learn to be tolerant, and to treat the opinions of others with that Christian forbearance which we justly claim for our own matured convictions.

With humbleness, yet with boldness, do I present to you this weak attempt to vindicate the Scriptures of Truth from the unfounded attack of the scientific unbeliever, and to render the most sacred rite of our church a true city of refuge for the most worn and the most shattered of the victims rescued from the fatal embrace of drink. Whatever of truth there may be in these halting utterances do I commend to your candid and prayerful consideration, knowing, as I well do, that there is no body of men in the world who are more unwilling to drift listlessly o'er

"Error's boundless sea,"

are more open to the testimony of Fact, are more ready and eager to be enlightened as to their duty;

and who, once the path of duty is made clear, are more unswervingly loyal to their convictions and to Truth, ever remembering in their inmost soul, that

> " Truth crushed to earth shall rise again :
> The eternal years of God are hers ;
> But Error, wounded, writhes with pain,
> And dies among his worshippers."

APPENDIX.

ANCIENT UNINTOXICATING WINES.

MUSTUM. — SWEET UNFERMENTED GRAPE JUICE. GREEK, "GLEUKOS."

I. PROTROPUM or Prochuma. Mustum from un trodden grapes.

II. LIXIVIUM. Mustum from grapes not fully trodden.

III. TORTIVUM or CIRCUMCISITUM. The marc taken out, edges of husks being cut, and again pressed.

IV. MUSTUM. Clarified by vinegar, and then drank fresh.

V. AEI GLEUKOS. Fermentation prevented by mineral pitch, and by burying in cold water or sand.

HEPSEMA.—MUSTUM INSPISSATED BY HEAT.

VI. CAROENUM. Mustum evaporated one-third.

VII. DEFRUTUM. Mustum evaporated one-half.

VIII. SAPA. Mustum evaporated two-thirds.

VARIETIES OF UNFERMENTED GRAPE JUICE.

Shown by Dr. Kerr to the Church Homiletical Society, in the Chapter House of St. Paul's Cathedral, on 1st November, 1881.

NAME.	LOCALITY.	VINTAGE.
Pekmetz (Liquid)	Smyrna	1874
Ditto ditto	Beyrout	1874
Balmetz (Semi-solid)	Smyrna	1874
Ditto ditto	Beyrout	1874
Nardenk (Liquid)	Beyrout	1874
Ditto ditto	Smyrna	1878
Almeira (23 specimens prepared by Dr. Kerr)	Spain	1878
Sweet Water (6 Ditto ditto)	Portugal	1878
English Hothouse (7 Ditto)..	London	1878
Wright's Unfermented Wine	Manufactured in London from Continental grapes	Various ending with 1881
Pure Unfermented Wine ...	Germany	1880
Ditto ditto ...	Manufactured in Manchester from Eastern grape juice	1878
Congress	New Jersey, U. S. A.... ...	1880
Various grapes (7 species) ...	Oporto	1880 1881
Bastardo	Alto Douro	1881
Malbec and Carbonet	Medoc	1881
Pineau	Côte d'Or	1880
Folle Blanche	Cognac	1880
Blanquette	Perpignan	1880
Grenache	Ditto	1880
Teinturier (Red juiced)	Orleans	1880
Noirien	Chalôns...	1880
Black Hambro...	The Netherlands...	1880
Riessling	Germany	1880
Traminer	Ditto	1880
Oestrich	Ditto	1880
Sylvaner	Ditto	1880
Capri	Calabria	1880
Lachrymæ Christi	Naples	1880
Constantia	Cape of Good Hope	1881
Hermitage	Australia	1880
Madeira Tinta	Madeira	1880
Ditto Pale	Ditto	1881

GRAPE JUICE.

UNFERMENTED.		FERMENTED.
Gluten Gum Aroma	... ...	None.

PROPORTION OF CONSTITUENTS OF UNFERMENTED GRAPE JUICE REMAINING AFTER FERMENTATION.

UNFERMENTED.		FERMENTED.
Albumen	... ...	A.
Sugar	... ...	S.
Tannin	... ...	Ta.
Acid Tartaric	... ...	Tartar.
Acid Malic	... ...	Malic Aci.
Potash	... ...	Pot.
Lime	... ...	Li.
Sulphur	... ...	Sul.
Phosphorus	... ...	Phosp.

FERMENTED.

NEW PRODUCTS.

Alcohol.	Extractive.
Acid Acetic.	Bouquet.
Œnanthic Ether.	

BIBLE WORDS FOR WINE.

HEBREW.

1. YAYIN. All kinds of Wine, unintoxicating and intoxicating.
2. TIROSH. Vine-fruit, gathered, trodden, found in cluster.
3. SHEKAR. Sweet drink. Generally Intoxicating. Half spirituous strength of port or sherry.
4. AHSIS. Unfermented freshly expressed juice.
5. SOVEH. Luscious boiled wine.
6. ASHISHAH. Fruit Cake.
7. KHAMAR. "Foaming," either of unfermented juice into vat, or during fermentation.
8. SHEMARIM. Wine on the lees; perhaps Preserves, well refined.
9. MESEK. Wine mixed with water or with drugs.
10. KHOMETZ. Fermented, but not intoxicating.

GREEK.

11. OINOS. All kinds of wine, fermented and unfermented.
12. GLEUKOS. Sweet wine, probably unfermented.
13. SIKERA. Sweet drink, probably intoxicating.

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